THE ELEMENTARY SCHOOL JOURNAL

UNIVERSITY OF ILLINOIS LIBRARY
JUN 27 1918

Edited by
THE FACULTY OF THE SCHOOL OF EDUCATION
THE UNIVERSITY OF CHICAGO
and published in conjunction with
THE SCHOOL REVIEW AND
SUPPLEMENTARY EDUCATIONAL MONOGRAPHS

Vol. XVIII JUNE 1918 No. 10

Rating of Teachers in Indiana
Elmer L. Ritter

Developmental Alexia: Congenital Word-Blindness, or Inability to Learn to Read
Clara Schmitt

The Use of the Woody Scale for Diagnostic Purposes
C. J. Anderson

A Series of Motivated Language Lessons
Anna A. Condon

Standard Tests and a Basal Method of Teaching Reading
D. C. Bliss

The Results of Some Classroom Measurements
Carl Cotton

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS, U.S.A.

THE CAMBRIDGE UNIVERSITY PRESS, London and Edinburgh
THE MARUZEN-KABUSHIKI-KAISHA, Tokyo, Osaka, Kyoto, Fukuoka, Sendai
THE MISSION BOOK COMPANY, Shanghai

PUBLICATIONS EDITED BY THE FACULTY OF THE SCHOOL OF EDUCATION OF THE UNIVERSITY OF CHICAGO

JOINT EDITORIAL COMMITTEE
CHARLES HUBBARD JUDD, *Chairman*

Articles and Editorials of *The School Review*
ROLLO LA VERNE LYMAN
FRANKLIN WINSLOW JOHNSON

Reviews
HAROLD ORDWAY RUGG
ROLLA MILTON TRYON

Articles and Editorials of *The Elementary School Journal*
FRANK NUGENT FREEMAN
HARRY ORRIN GILLET

Supplementary Educational Monographs
WILLIAM SCOTT GRAY

The Elementary School Journal

Vol. XVIII CONTENTS FOR JUNE 1918 No. 10

EDUCATIONAL NEWS AND EDITORIAL COMMENT - - - - - - - - 729
Teaching Immigrants and Illiterates; Detroit Summer Sessions of Junior High Schools; Publication of the Committee on Public Information; Methods of Silent Reading; Junior High School; Civics in Elementary Schools.

RATING OF TEACHERS IN INDIANA - - - - - - - ELMER L. RITTER 740

DEVELOPMENTAL ALEXIA: CONGENITAL WORD-BLINDNESS, OR INABILITY TO LEARN TO READ.—*Concluded* - - - - - - - - - CLARA SCHMITT 757

THE USE OF THE WOODY SCALE FOR DIAGNOSTIC PURPOSES C. J. ANDERSON 770

A SERIES OF MOTIVATED LANGUAGE LESSONS INTRODUCING DESCRIPTION AS A NEW FORM OF COMPOSITION - - - - - - - ANNA A. CONDON 782

STANDARD TESTS AND A BASAL METHOD OF TEACHING READING D. C. BLISS 795

THE RESULTS OF SOME CLASSROOM MEASUREMENTS - - - CARL COTTON 802

EDUCATIONAL WRITINGS:
I. COMMENT ON CURRENT EDUCATIONAL WRITINGS - - - - - H. O. RUGG 807
II CURRENT EDUCATIONAL PUBLICATIONS RECEIVED IN MAY, 1918 - - - - - - 815

The Elementary School Journal is published monthly from September to June by the University of Chicago at th University Press. ¶ The subscription price is $1.50 per year; the price of single copies is 20 cents. Orders for service of less than a half-year will be charged at single-copy rate. ¶ Postage is prepaid by the publishers on all orders from the United States, Mexico, Cuba, Porto Rico, Panama Canal Zone, Republic of Panama, Hawaiian Islands, Philippine Islands, Guam, Samoan Islands, Shanghai. ¶ Postage is charged extra as follows: For Canada, 30 cents on annual subscriptions (total $1.80), on single copies, 3 cents (total 23 cents); for all other countries in the Postal Union, 46 cents on annual subscriptions (total $1.96), on single copies, 6 cents (total 26 cents). ¶ Patrons are requested to make all remittances payable to the University of Chicago Press in postal or express money orders or bank drafts.

Special Combination Rates: The Elementary School Journal, The School Review, and Supplementary Educational Monographs for one full year at a special rate of $6.50 plus 50 cents postage on the Monographs. The Elementary School Journal and Monographs are offered at $5.75 for one full year plus 50 cents for postage. In case of Canadian and foreign subscriptions the usual postal charges noted above should be added.

The following are authorized to quote the prices indicated:

For the British Empire: The Cambridge University Press, Fetter Lane, London, E.C. 4, England. Yearly subscriptions, including postage, 8*s.* each; single copies, including postage, 1*s.* each.

For Japan and Korea: The Maruzen-Kabushiki-Kaisha, 11 to 16 Nihonbashi Tori Sanchome, Tokyo, Japan. Yearly subscriptions, including postage, Yen 4.00 each; single copies, including postage, Yen 0.50 each.

For China: The Mission Book Company, 18 Peking Road, Shanghai. Yearly subscriptions, $1.50; single copies, 20 cents, or their equivalents in Chinese money. Postage extra, if mailed direct outside of Shanghai, on yearly subscriptions 46 cents, on single copies 6 cents.

Claims for missing numbers should be made within the month following the regular month of publication. The publishers expect to supply missing numbers free only when losses have been sustained in transit and when the reserve stock will permit. Deliveries are not guaranteed within the war zones of Europe nor in other countries where transportation is disturbed by conditions incident to war.

Business correspondence should be addressed to The University of Chicago Press, Chicago, Ill.

Communications for the editors and manuscripts should be addressed to the Editors of THE ELEMENTARY SCHOOL JOURNAL, The University of Chicago, Chicago, Ill.

Entered as second-class matter, October 12, 1903, at the Post-office at Chicago, Illinois, under the Act of March 3, 1879.

NOTICE TO READERS

Because of the present congested condition of the railroads delays in the delivery of second-class mail are unavoidable and your copy of

The Elementary School Journal

may not reach you promptly on its regular date of arrival. Please wait a few days before assuming that it has been lost en route and it will probably be in your hands before your letter can reach us. We regret the delays and ask your patience until conditions are again normal.

THE UNIVERSITY OF CHICAGO PRESS

WHAT IS CHRISTIANITY?

A STUDY OF RIVAL INTERPRETATIONS

By GEORGE CROSS

Professor of Systematic Theology, Rochester Theological Seminary

THIS book is a comprehensive survey of the rival interpretations of Christianity. The aim of the author is to assist the intelligent Christian layman and the minister of the gospel who have felt the need of revising their doctrinal inheritance to reach a more satisfactory interpretation of the Christian faith. Realizing the imperativeness of thinking through afresh the essential problems of theology, the author presents in this volume discussions designed to prepare the way for a statement and vindication of the truth of the Christian religion. He expresses the hope that "a survey of the best-known types of the Christian faith will assist the inquiring reader to reach at least a point of view from which his work of formulating a theology for himself may begin."

x+210 pages, cloth; $1.00, postage extra (weight 1 lb. 1 oz.)

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO **5821 Ellis Avenue** **ILLINOIS**

Teachers Agencies

Albert TEACHERS' AGENCY
25 E. Jackson Blvd., Chicago.
"Teaching as a Business," with chapters on War, Salaries, etc., sent free. Thirty-third year. Register in four offices with one fee. Branch offices—
New York: 437 5th Ave. Denver: Symes Bldg. Spokane: Peyton Bldg.

THE WAY TO THE BEST POSITIONS
THE CHICAGO TEACHERS' AGENCY
31 West Lake Street, Suite 205
DIRECT TO SCHOOL AUTHORITIES: U. S. AND CANADA
300% MORE DIRECT CALLS IN 1917; 350% MORE TEACHERS PLACED

Oldest Chicago Agency
Brewer Teachers' Agency
The Auditorium, Chicago
A generation of Safe Successful Service

FROM THE GREAT LAKES TO THE PACIFIC

PROMPT
EFFICIENT
SERVICE

MINNEAPOLIS TEACHERS AGENCY

WRITE FOR FREE BOOKLET
306 14th Ave. S.E.
Minneapolis, Minn.

ADVERTISE and sell the books, supplies, and things you don't need. Reach 15,000 teachers for only 2 cents a word. Write *The School News*, New Egypt, N.J.

POSITIONS OF ALL KINDS
Never was the demand so great for qualified teachers and specialists. For nine years we have given our time and energy to this work. Write for our *free* literature. State qualifications briefly.
Co-operative Instructors' Association
Marion - - - Indiana

Teachers Wanted No enrolment fee. Positions always open. We also supply school boards with the most capable teachers. Particulars free. Eastern Educational Bureau, New Egypt, N.J.

The Midland Schools Teachers' Agency, of Des Moines, Iowa, commands the confidence of employing school officers in every state west of the Mississippi River. Its methods are conservative, and its contract is one of the most liberal offered. Teachers desiring positions are requested to write for information today, and school officers in search of teachers will receive prompt and intelligent attention.
C. R. SCROGGIE, *Proprietor*

Sell health and accident insurance during the summer months. Address the INTERSTATE BUSINESS MEN'S ACCIDENT ASSOCIATION, DES MOINES, IOWA, for particulars. Large commissions, low premiums, good open territory.

Teachers Agencies

CLARK'S — FOR A SINGLE FEE YOU JOIN ALL OFFICES

CHICAGO, Steinway Hall · NEW YORK, Flat Iron Bldg. · BALTIMORE, Munsey Bldg. · KANSAS CITY, MO., New York Life Bldg. · ST. PAUL, Exchange Bank Bldg. · CHATTANOOGA, TENN., Temple Court · SPOKANE, WASH., Chamber of Commerce Bldg.

TEACHERS' AGENCY

28 E. Jackson Blvd., Chicago

Boston New York Birmingham Denver Portland Berkeley Los Angeles

To this organization—national in scope—employers and teachers naturally turn in making a survey of the whole educational field for best teachers and teaching opportunities.

Thurston Teachers' Agency

Short Contract. Guaranteed Service. Write for our Free Booklet—How to Apply. 26th Year

E. R. NICHOLS, Mgr. 221 S. Mich. Ave. CHICAGO, ILL.

A TEACHERS AGENCY THAT HELPS

We don't find a place for every teacher who registers with us, and we don't have the right teacher to recommend for every place that applies to us, but we very seldom send a teacher where he does not fit. If you come to us you will get honest work. All our recommending is upon application from the place.

THE SCHOOL BULLETIN TEACHERS AGENCY

C. W. Bardeen, Manager **SYRACUSE, NEW YORK**

Elementary Teachers' Weekly Plan Book

By W. S. DAKIN

Board of Education, Connecticut

Only one copy per year for each teacher is needed to insure a complete record. Please note below five important features of this book. It has been tried out under the severest conditions. On using it you will discover many other points in its favor that are not enumerated here.

1. The weekly plan unit involves a minimum amount of work on the part of teachers. Planning lessons in units of one week enables teachers to plot out systematic, progressive lessons that can be finished in the time allotted. Daily plans are scrappy because the unit of time chosen is too small for complete work.

2. The suggestive topics at the head of each column in the *Plan Book* insure attention to some of the essential points in proper preparation of lessons.

3. Showing the outline of work, as it does, always several days in advance, a supervisor can know what teachers are about to do in time to criticize and correct the assignment before it has been executed, not afterward as with the usual plan book—an obvious advantage.

4. The scheme for requiring teachers to scan the entire course of study before beginning the year's work—see first six pages of book—is the only way to insure comprehensive teaching with equal stress on all portions throughout the year. Under this method there will be no hurrying to catch up at the close of term, and no marking time because work has been covered too soon. If this feature seems impractical for young teachers it may be omitted without in any way interfering with the use of rest of book as intended.

5. The back of every page is purposely left blank so that teachers can paste in clippings from educational papers, notes, etc., thus making each completed book a source of reference and aid to future teaching worth preserving.

The price of DAKIN'S WEEKLY PLAN BOOK is 50 cents, postpaid

THE PALMER COMPANY, *Publishers*

120 BOYLSTON STREET **BOSTON, MASS.**

Truancy and Non-Attendance in the Chicago Schools

A Study of the Social Aspects of the Compulsory Education and Child Labor Legislation in Illinois

By

EDITH ABBOTT *and* SOPHONISBA P. BRECKINRIDGE

Of the Faculty of the University of Chicago and of the Chicago School of Civics and Philanthropy

This study of truancy and non-attendance, made by two persons who, for nearly a decade, have been closely connected with social agencies of Chicago, is divided into two parts: Legal Principles: History of Compulsory Education Legislation in Illinois; and Present Conditions and Methods of Treatment. The list of appendixes of about a hundred pages furnishes valuable material and extracts in regard to historical matters relating to compulsory education and child labor laws.

viii+472 pages, cloth; $2.00, postage extra (weight 1 lb. 10 oz.)

The University of Chicago Press

CHICAGO 5821 Ellis Avenue **ILLINOIS**

A Manual for Writers

***By* JOHN M. MANLY**

Head of the Department of English of the University of Chicago

***and* JOHN A. POWELL**

A book designed to aid authors and all others who are concerned with the writing of English. It aims to answer the practical questions that constantly arise in the preparation of manuscripts for publication, business letters, and any sort of composition where correctness of form is an important element.

It treats in a clear and convenient way the matters of grammar, spelling, and general form about which writers need to be informed, and gives full directions on the preparation of "copy" for the printer and the correcting of proof. The chapter on letter-writing is unique and gives just the help that is constantly wanted and that is not found in other manuals.

viii+226 pages, 12mo, cloth; $1.25 net, postage extra (weight 1 lb. 8 oz.)

The University of Chicago Press

Chicago 5821 Ellis Avenue **Illinois**

Handbooks of Ethics and Religion

for College Classes and Adult Study-Groups

The Ethics of the Old Testament, by HINCKLEY G. MITCHELL. $2.00 plus postage; weight 1 lb. 14 oz.

A comprehensive view of the development of ethics and morality among the Hebrew people—the nation that led the ancient world in an attempt to reach the good.

The Story of the New Testament, by EDGAR JOHNSON GOODSPEED. $1.00 plus postage; weight 1 lb.

A clear exposition of the development of the New Testament based upon the definite thesis that "Christianity did not spring from the New Testament but the New Testament from Christianity."

The Origin and Growth of the Hebrew Religion, by HENRY T. FOWLER. $1.00 plus postage; weight 1 lb.

A remarkable exposition of religious phenomena from a fresh psychological standpoint, combining both structural and functional methods of approach.

The Origin and Growth of Early Christianity, by FRED MERRIFIELD. For early publication.

The Psychology of Religion, by GEORGE A. COE. $1.50 plus postage; weight 1 lb. 6 oz.

There are few books which are adapted for use as college texts and are at the same time interesting reading for those outside of scholastic circles. But this book is one of that few.

The Religions of the World, by GEORGE A. BARTON. $1.50 plus postage; weight 1 lb. 6 oz. *Now Ready.*

The author gives a keen and sympathetic interpretation of all the great religions of the world, and a summary of the chief facts regarding their origin and history. The book combines popular presentation and scholarly accuracy.

THE UNIVERSITY OF CHICAGO PRESS

CHICAGO **5821 Ellis Avenue** **ILLINOIS**

THE FLORIDA SCHOOLROOM

Published monthly at the University of Florida

GAINESVILLE, FLORIDA

(The Athens of Florida)

is the official organ of the

State Teachers' Association
State Superintendent of Education
Association of History Teachers of Florida
Association of South Florida Latin Teachers
Department of Education of the Florida Federation of Women's Clubs

Florida pays the best salaries in the South. She is the most progressive state in the South. Subscribe for the *Schoolroom* and learn all about Florida's excellent school system.

Use this blank

Florida Schoolroom,
Gainesville, Florida

I hand you herewith one dollar, for which send me the *Florida Schoolroom* one year.

Name_____

Post-office _____

State _____

Selling Agents for the

Yale, Harvard, Princeton, and University of Chicago Presses

and Wholesale Dealers in

the Books of ALL PUBLISHERS

The Baker & Taylor Company
354 Fourth Avenue, New York
at Twenty-sixth Street

If you do not receive our advertising matter regularly, ask to be put on our mailing list.
THE UNIVERSITY OF CHICAGO PRESS

THE JOURNAL OF HOME ECONOMICS

Devoted to the Interests of the Home

THE Household Arts have become such an integral part of the school curriculum that no progressive teacher can afford to be without authoritative knowledge of this subject and its development. The *Journal of Home Economics* gives this information. Articles that have lately appeared are:

Mobilizing the Nation's Children for Red Cross
ERNESTINE EVANS, American Red Cross

The Luncheon as a Project in Elementary Education
JENNY SNOW, Supervisor, Household Arts, Chicago Public Schools

Courses in Sewing for Elementary Schools
MARTHA FRENCH, State Normal School, Ypsilanti, Mich.

Mathematics Applied to Household Arts
KATHARINE BALL, University of Minnesota

Subscription $2.00 a year Single copy, 25 cents

AMERICAN HOME ECONOMICS ASSOCIATION
1211 CATHEDRAL ST. BALTIMORE, MD.

The Elementary Course in English

By JAMES F. HOSIC
Head of the Department of English, Chicago Normal College

The book presents in outline a working theory of elementary English, with selected references to recent literature on the subject. It contains also a suggestive course of study in composition, grammar, word-study, reading, and literature. For individual study and for group discussions in normal schools, teachers' reading circles, teachers' institutes, and parents' associations.

"Every teacher in an elementary school should have a copy of the book."—*Interstate Schoolman.*

75 cents, postage extra (weight 14 oz.)

The University of Chicago Press
CHICAGO 5821 Ellis Avenue ILLINOIS

Our new descriptive
EDUCATIONAL CATALOGUE
presents publications of interest in all departments of work

Education
English
Economics
Journals
Mathematics
Modern Languages
Ancient Languages
Outline Maps
Religious Education

Catalogue free on request

The University of Chicago Press
Chicago 5821 Ellis Avenue Illinois

Purchase by Mail

¶ An opportunity to purchase by mail **the books of all publishers,** and miscellaneous supplies such as **paper, envelopes, tablets, fountain pens, pencils, notebooks, examination books, etc., is** offered by the University of Chicago Press through its Bookstores. Orders sent by mail will receive prompt attention

Address

The University of Chicago Press
Chicago Illinois

30 Magazines All different, all late issues. Yours for only 25 cents prepaid. Great help in teaching. Satisfaction guaranteed. Eastern Bureau, New Egypt, N.J.

Physical Training Summer Course
For public-school teachers, physical directors, playground workers, coaches. 1918 summer session, July 1 to 27. Ask for program. Forty-five graduates of two-year course this year (20 men) thoroughly trained in all branches of physical education, playground and scout work.
Normal College *of the* North American Gymnastic Union
(Accredited in classes A, B, and C)
409 East Michigan Street **Indianapolis, Ind.**

CORNELL UNIVERSITY
Summer Session: July 8–August 16
Instruction for teachers in all high-school subjects, and for teachers in all grades in Music, Nature Study, Gardening, Physical Training, Geography, Manual Training. Special attention this year to French language, literature, history, and philosophy. Daily conversation in French and Spanish. Field work, including bird study. Preparation for giving mental tests and guidance of special classes.
Full program on application to the
Secretary of the University, Ithaca, N.Y.

The ORIGINAL Self-Filler
And Still the Leader
Have you ever owned a *good* fountain pen? Avoid writing troubles—use the always dependable CONKLIN.
Conklin's Self-Filling Fountain Pen NON-LEAKABLE
The Conklin Pen Mfg. Co., Toledo, O.

A Vast Industry is Printing
Printing has for years been the sixth great business of the United States; it is now the fifth, perhaps the fourth in volume. In importance it is the first. A youth who acquires knowledge of the Printers' Art and practice is educated well—educated in the best way; his hand, eye, brain and habits are splendidly trained. He has acquired a trade; he has a grip on business and world affairs; he has what will make him more valuable and efficient in any line of business he takes up in after life. The printing office is an essential part of school work and training.
Thousands of schools have tested it out; everyone approves and prizes it.
We furnish estimates, outfits and help. Call on us
Barnhart Brothers & Spindler
Chicago Washington, D. C. Dallas Saint Paul
Kansas City Omaha Saint Louis Seattle
(Set in Barnhart's New Parsons Series)

VITAL BOOKS ON VITAL SUBJECTS

SEX HYGIENE *60 cents*
By Frederic Henry Gerrish, M.D., LL.D.
The late President Hyde of Bowdoin College said when purchasing 1,000 copies for distribution among his students, "It is a pleasure to testify to the good done by Dr. Gerrish's lecture on SEX HYGIENE to Bowdoin Freshmen. While other forces have been at work, this lecture has been a powerful factor in developing a student sentiment which looks down on licentiousness as a mean and cruel sacrifice of the health and happiness of the women and children immediately or remotely involved.
"The College is glad to have for itself, and to share with other institutions, the opportunity to distribute to coming classes a talk so scientifically direct and so ethically elevated."

SEX WORSHIP AND SYMBOLISM OF PRIMITIVE RACES *$3.00 net*
By Sanger Brown, II, M.D.
The intimate relationship between religion and sex symbolism is one of the many vital subjects brought out in this volume. The author reminds us that phallic worship was a form of religion with many of the primitive peoples. Some of our present-day symbolism which we look upon as innocent and without special significance, really owes its origin to ancient religious sex practices.

RICHARD G. BADGER—PUBLISHER—BOSTON

NEW BOOKS

The Greek Theater and Its Drama
80 illustrations. $3.00, postage extra (weight 2 lbs. 11 oz.)

By ROY C. FLICKINGER, Professor of Greek and Latin, Northwestern University.
A wide range of topics, eighty illustrations, extensive bibliographical references, a full General Index, a complete Index of Passages.

What Is Christianity?
$1.00, postage extra (weight 1 lb.)

By GEORGE CROSS, Rochester Theological Seminary.
A comprehensive and interesting survey of the rival interpretations of Christianity.

Starved Rock State Park and Its Environs
With maps and illustrations. $2.00, postage extra (weight 1 lb. 8 oz.)

By CARL O. SAUER, the University of Michigan, GILBERT H. CADY, the Illinois State Geological Survey, and HENRY C. COWLES, the University of Chicago.
A very thorough and interesting geographical study of this best-known feature of the Illinois Valley. Published as Bulletin No. 6 of the *Geographic Society of Chicago*.

The Illinois and Michigan Canal
$2.00, postage extra (weight 1 lb. 6 oz.)

By JAMES WILLIAM PUTNAM, Butler College.
A study which will interest both historians and economists. Published as Vol. X of the collection of the *Chicago Historical Society*.

The Syntax of High-School Latin
75 cents, postage extra (weight 1 lb.)

Edited by LEE BYRNE, Mobile (Alabama) High School.
New edition revised and enlarged. A co-operative study by fifty collaborators. The book furnishes a scientific basis for the selection and arrangement of the syntax topics in a high-school Latin course.

Spirit, Soul, and Flesh
$2.00, postage extra (weight 1 lb. 1 oz.)

By ERNEST D. BURTON, the University of Chicago.
An exhaustive examination of the terms "spirit," "soul," and "flesh" as they appear in Greek literature from Homer to 200 A.D. A volume of the second series of the *Historical and Linguistic Studies in Literature Related to the New Testament*.

An Experimental Study in Left-Handedness, with Practical Suggestions for Schoolroom Use
60 cents postpaid

By ARTHUR L. BEELEY, the University of Utah.
Vol. II, No. 2 (Whole No. 8), of the *Supplementary Educational Monographs*, published in conjunction with the *School Review* and the *Elementary School Journal*. School administrators and teachers who have to deal with left-handed children will get many valuable suggestions from this monograph for the treatment of such cases.

Qualitative Nouns in the Pauline Epistles and Their Translation in the Revised Version
50 cents, postage extra

By A. WAKEFIELD SLATEN.
Vol. IV, Part 1, second series, of the *Historical and Linguistic Studies in Literature Related to the New Testament*. A contribution to exactness in New Testament interpretation, listing nine hundred Greek nouns used in the Pauline Epistles in the qualitative sense, a detailed study of fifteen of the more important of these being used.

Goode's Series of Base Maps and Graphs

Prepared by J. PAUL GOODE, the University of Chicago.
Maps: No. 111, Canada, 15×10½ inches, 3 cents.
No. 112, Mexico, 15×10½ inches, 3 cents.
Graphs: No. 80, Climatic Chart (yearly), 1 cent.
No. 181, Monthly Weather Chart, 3 cents.

THE UNIVERSITY OF CHICAGO PRESS
CHICAGO **5821 Ellis Avenue** **ILLINOIS**

Supplementary Educational Monographs

Edited in conjunction with *The School Review* and *The Elementary School Journal*

Published by THE UNIVERSITY OF CHICAGO PRESS

VOLUME I

Monograph No. 1

Studies of Elementary-School Reading through Standardized Tests. By WILLIAM SCOTT GRAY, PH.D., Assistant Professor of Education and Dean of the College of Education, University of Chicago. Pp. viii+158. Price $1.00.

Monograph No. 2

An Experimental Study in the Psychology of Reading. By WILLIAM A. SCHMIDT, PH.D., Professor of Education, University of Oklahoma. Pp. iv+126. Price $0.75.

Monograph No. 3

The Administration of Secondary-School Units. By LEONARD V. KOOS, PH.D., Professor of Education, University of Washington. Pp. x+194. Price $1.00.

Monograph No. 4

Experimental Studies in Arithmetic. By GEORGE S. COUNTS, PH.D., Professor of Education, University of Delaware. Pp. iv+128. Price $0.75.

Monograph No. 5

Types of Reading Ability as Exhibited through Tests and Laboratory Experiments. An Investigation Subsidized by the General Education Board. By CLARENCE TRUMAN GRAY, PH.D., Adjunct Professor of Education, University of Texas. Pp. xiv+196. Price $1.25.

Monograph No. 6

Survey of the Kindergartens of Richmond, Indiana. By ALICE TEMPLE, ED.B., Assistant Professor of Kindergarten Education, University of Chicago. Pp. iv+58. Price $0.40.

VOLUME II

Monograph No. 1

(Whole No. 7)

Scientific Method in the Reconstruction of Ninth-Grade Mathematics. By H. O. RUGG, Associate Professor of Education, University of Chicago; and J. R. CLARK, Chairman of Department of Mathematics, Parker High School, Chicago. Pp. vi + 190. Price $1.00.

A 190-page report of experimentation in secondary mathematics during 1913–18. Gives detailed account of historical development and relative effectiveness of the present organization as revealed through the use of standardized tests; discusses the design and construction of such tests; shows how both formal

and "reasoning" abilities can be improved through the use of formal practice material and through a psychological analysis of methods of learning; suggests a completely reconstructed course of study as an outcome of tabular analyses of both school and occupational needs and a careful study of the psychological outcomes of instruction. This is more than a report on standardized tests in secondary mathematics. It is an evaluation of the measuring movement in education and sets forth a systematic program for future procedure.

Monograph No. 2 (In Press)

(Whole No. 8)

An Experimental Study in Left-Handedness, with Practical Suggestions for Schoolroom Use. By ARTHUR LAWTON BEELEY, A.M., Instructor in Psychology and Education, University of Utah, Salt Lake City, Utah.

A large number of left-handed children were tested by Mr. Beeley, first, for the purpose of determining a method of detecting left-handedness and, secondly, for the purpose of determining the relation between left-handedness and certain types of handwriting. The material is presented in full and the conclusions reached make it clear that left-handedness can be determined accurately by one of the methods selected by Mr. Beeley. School administrators and teachers who have to deal with left-handed children will find this a thoroughly scientific review of the whole problem and will get many valuable suggestions from the monograph for the treatment of such cases.

Monograph No. 3 (In Press)

(Whole No. 9)

The Handwriting Movement. A Study in the Elements of Penmanship Efficiency. By FRANK N. FREEMAN, Associate Professor of Educational Psychology, University of Chicago. With the assistance of H. W. NUTT, MARY L. DOUGHERTY, C. F. DUNN, and PAUL V. WEST.

Professor Freeman and a number of collaborators, working under a subsidy provided by the General Education Board, have taken kinetoscope pictures of the movements made during writing. Both children and adults have been photographed. The photographs include also different systems of handwriting movements. These photographs have been analyzed to show what are the characteristics of mature and immature penmanship and what are the special characteristics of the different systems now commonly employed in schools. The monograph is the most extensive experimental study that has ever been made of penmanship, and is fully illustrated.

Monograph No. 4 (In Press)

(Whole No. 10)

Reading: Its Nature and Development. By CHARLES HUBBARD JUDD, Director of the School of Education, University of Chicago. With the co-operation of WILLIAM SCOTT GRAY, KATHERINE MCLAUGHLIN, CLARENCE TRUMAN GRAY, CLARA SCHMIDT, and ADAM RAYMOND GILLILAND.

Professor Judd with the aid of several collaborators has carried on a series of experiments in reading with adults and with children in the grades from the third to the seventh. This monograph summarizes the results of a number of different types of experimental study, including the treatment of a number of cases of defective readers. A general outline is reached of the stages of development through which children pass in reading. A contrast is made between adult reading and the reading of children both in oral and in silent reading. The monograph reports a more complete experimental study of reading than any volume which has been issued on this subject.

SUBSCRIPTION RATES

The School Review	$1.50 a year
The Elementary School Journal	1.50 a year
Supplementary Educational Monographs (Postage 50 cents extra)	5.00 per volume

The *Monographs* are issued in single numbers which may be purchased separately. For convenience in binding and reference they are listed as numbers within a volume.

A combination of all three publications is offered for $6.50 plus 50 cents postage on the *Monographs*.

VOLUME XVIII NUMBER 10

THE ELEMENTARY SCHOOL JOURNAL

CONTINUING "THE ELEMENTARY SCHOOL TEACHER"

JUNE 1918

EDUCATIONAL NEWS AND EDITORIAL COMMENT

Teaching Immigrants and Illiterates

Legislation is being enacted in many of the states and by Congress in the effort to perform a duty which has been recognized in a vague way for a long time, but which has been put off because of lack of funds and enthusiasm. This legislation relates to the training of immigrants and to the correction of illiteracy.

The astonishing fact was brought out by the coming together of the national army that there are a great many men in this country who cannot read or write. Not only is there a deficiency in English, but in many cases the men in the army cannot read and write any language whatsoever. The figure is reported by the Bureau of Education to amount to fifty thousand in the national army.

The bringing together of a large number of men always emphasizes any social phenomenon, but this revelation with regard to the deficiency of our educational system is enough to shock into action even those who have up to this time been unmoved by the statistics with regard to illiteracy and the needs of immigrants.

The *New York Sun* reports as follows with regard to New York state:

> The three measures for the compulsory education of all non-English-speaking minors, which Governor Whitman has approved, may turn out to be

prolific of difficulties. No one will question the excellence of their intent; and they seem to be clearly drawn and possibly well adapted to their purpose. But it looks a little like a matter for post-bellum development rather than one that demands immediate attention among pressing war problems. Moreover, the additional expense will be enormous, if it be true, as estimated, that there are no less than 72,000 boys and girls between the ages of sixteen and twenty-one who will come under the provisions of these laws.

Senator Robinson's bill requires that every boy or girl between sixteen and twenty-one years of age who cannot speak, read, or write the English language, as is required for the completion of the fifth grade in public or private schools, must attend some day or evening school or some school maintained by an employer under the supervision of the local school authorities. This law takes effect October 1.

A second bill, introduced by Assemblyman Schuyler Meyer, proposes night schools for the education of such boys and girls in cities of the first class during the day school term; in each city of the second class on at least one hundred nights, and in each city of the third class on at least eighty nights. All such night schools are to be free.

The third bill, presented by Senator Lockwood, appropriates $20,000 to maintain training institutes in normal schools and elsewhere for the regular training of teachers to give instruction to these illiterates over sixteen years old.

This calls up one obvious difficulty. There are no teachers available. It would be impossible to add 72,000 pupils to the already well-filled night schools. Moreover, these larger children require particular treatment. Existing night schools are not planned for them, and in many districts there are no buildings in which to house them.

Perhaps, after all, it is only adding one more large item to the growing school problem that was already complex enough. Children of school age increase far more rapidly than the system of teaching can be—or, at least, has been—expanded to meet their need. Large as the expenditure now is, it must be enormously larger before we can hope to catch up, in caring for our own children, to say nothing of providing for these newcomers.

The following article from the *Christian Science Monitor* states the case for Massachusetts and also calls attention to the necessity of general federal legislation:

There are in this state more than 333,000 people, ten years of age or older, who can neither read nor write English, according to Charles F. Towne, recently appointed by the State Board of Education to direct its newly installed department of immigrant education. And it was for the purpose of more definitely and more thoroughly teaching the English language to aliens, and so quite perceptibly diminishing the number of the non-English speaking, that this new department was brought into being by the board. And though in office but five weeks Mr. Towne already reports plans nearly ready for action.

"In Massachusetts," said Mr. Towne, "in every representative group of 1,000 people there are 110 who do not understand our language. We have no common means of communication with them, with the almost tragic result that they cannot grasp the significance of our being in the war, and its many just demands upon them.

"As Secretary Lane has said, such a large part of our population cannot read our daily papers, cannot make out the Liberty Loan posters, the appeals on food conservation, and so on, that it is a real menace. It is easy enough for agitators to tell the parents among these aliens that their boys in France are fighting for selfish money magnates."

Mr. Towne, who has come directly from five years' experience as the assistant superintendent in charge of evening-school work in Providence, Rhode Island, announces his present purpose thus: to find the best methods for teaching English to foreigners and to train teachers in these methods. A class of teachers started training under Mr. Towne last week. He further announces that he has prepared a special course for teachers of English to immigrants to be given in Hyannis Normal School between July 9 and August 9.

In explaining the problem immediately before him, Mr. Towne said: "Of course the public school is the logical place in which to do this teaching, yet 333,000 suddenly added to the rolls would overwhelmingly tax the educational equipment of the state. Furthermore, 70 per cent of this 333,000 are over twenty-one years or over, and are not, therefore, affected by the illiterate minor law regarding school attendance.

"There always has been a great deal of exploitation and inequality among the aliens because of their ignorance of the English language. Assimilation and naturalization have lagged. We have allowed them to segregate into cramped communities as troublesome parasites upon our citizenship instead of helping them to become its strong branches. Now citizenship has long been preached and insisted upon, but it cannot come before its language is understood.

"The evening school has not solved the difficulty. The men are not attracted to a school that comes at the tail end of the day, and the women with children do not find it easy to get away. Nor have these schools been able to supply the most practical kind of instruction.

"Employers of labor appreciate the value of employees who can understand directions. The times demand labor conservation, so that employers are more unwilling than ever to submit to the expense and the risk of constant discharge and hiring of help. They are more willing to train and to keep the help which they now have. In Detroit and other cities remarkable success has been won by big employers who have instituted educational courses right in the factories. These classes have proved to be the highest type of melting pot in the making of citizens, coincident with the making of intelligent employees."

The solution of the problems that are suggested in these efforts of the various states will never be complete until there is a federal department of education equipped to carry on a movement throughout the whole nation. Several national commissions are at work on the problem of framing a suitable bill for the creation of a federal department of education. Very shortly the action of these commissions ought to be in the hands of Congress and before the people of the country. It is to be hoped that the movement will be successful in order that these problems of Americanization may be solved.

Detroit Summer Sessions of Junior High Schools

The city of Detroit has a well-developed system of junior high schools. During the last two summers it has laid especial emphasis on the work of these schools. The reason for doing so is that children of the junior high school age are old enough so that they can readily take advantage of educational opportunities offered during the vacation period and they are not old enough to be admitted to the various industries. The parents of children from twelve to fifteen years of age are coming to recognize more fully than they used to the importance of using the summer in some productive way.

The statistics of attendance in these summer sessions are of especial interest because they show, in the first place, that the schools which were originally organized to take care of delinquent students are coming to be attended more and more largely by those who are taking advanced courses. The statement which is made in a report from the superintendent's office on this matter is as follows:

> Although the summer sessions were originally started for delinquent children, this condition has long since been entirely changed. During the first few years the delinquents were given the advantage over those trying to advance a half-grade by caring for the repeaters first. If there happened to be any room after the delinquents had been enrolled others were admitted. In 1916 conditions had so changed that this ruling was dropped. This was due to the demand of parents that their children, bright and industrious enough to avail themselves of the new opportunities, be given a chance. The result was that 786 of the children enrolled were taking an advance grade and 438 were repeating work. The sessions of 1917 saw an even more radical shifting of

alignment of these two classes of students. Only 510 of the total enrolment were classed as repeaters and the remainder, 85 per cent of the total, were all taking new work. This notable change can possibly be largely accounted for by the awakening of the parents to new opportunities for their children, a fact brought closer home to them by a modest publicity campaign conducted by the department of summer schools. The great waste of time caused by a two months' cessation of school during the warm weather is appealing less to thinking parents each year. The uncertainty of the future is also a determining factor in forcing them to the conclusion that it is wise to secure for their children all the knowledge they possibly can before supernormal conditions prevail and affect the family's economic life.

The second matter of especial interest is the very large percentage of average attendance in these summer sessions. The statement from the superintendent's office on this matter and also on the matter of the cost of conducting these sessions is as follows:

> The average high-school attendance is 94.3 per cent, while that of the elementary schools averages several points higher. The uniformly agreeable weather was responsible for the increase over the 92.7 per cent of 1918. The teaching cost compares very favorably with the regular sessions. On paper summer schools ought to be twice as expensive, due to double-period classes, each student reciting twice a day in the same subject. This actually cuts in half the number of students taught by each teacher. Summer school costs have been kept down by eliminating small classes. Thirty pupils form the average class, a slightly higher ratio than during regular sessions. The teaching cost in the high schools is necessarily larger than in the elementary schools, due to the difference in salary schedule. The total cost per student, leaving Cass Technical out of consideration, is approximately $4.85.

Publication of the Committee on Public Information

The Committee on Public Information, which is virtually the publicity department of the federal administration, will begin the publication during the summer of a new bulletin which is to be distributed to teachers. This bulletin is issued in compliance with the request of the National Emergency Council of Education that the federal government bring together in some centrally organized form the various matters with which the schools are asked to deal.

In announcing the new publication the Committee makes the following statements:

> I. PURPOSE
>
> The basis of all service is morale. If the American people are rightly informed as to the origin of the war, the righteousness of our entry, and the

supreme importance to us and to the world of bringing it to a successful issue, they will continue to bear willingly and without complaint the necessary burdens. The schools are among the most important agencies for accomplishing this work, for through them most of the specific appeals for co-operation and service are made. It is the purpose of this publication to provide a means for building up a proper morale and for unifying those propagandas and activities which affect the schools.

II. CONTENT

It is the aim of this publication:

1. To interpret to the teachers of America and through them to the children under their charge high ideals of American patriotism and the privileges and obligations of American citizenship.

2. To facilitate the study of the causes and course of the war and of the various problems connected therewith.

3. To present, as far as may be practicable, with some reference to their order of priority, the propagandas and activities of the various federal agencies seeking access to the schools.

4. To serve as a clearing house for the interchange of plans, suggestions, and successful experiences relating to war service work in the schools.

5. To direct attention to some of the more important articles, pamphlets, and other publications which deal with war activities in relation to the schools.

III. FREQUENCY OF ISSUE

During the coming summer it is planned to issue a special number for the teachers attending summer schools in colleges, normal schools, and universities, and a special number for teachers attending county and city teachers' institutes throughout the country. During the school year the publication will be issued at such regular intervals as may seem best in order to accomplish the desired purpose.

IV. EDITORIAL MANAGEMENT

The publication will be issued by the Division of Civic and Educational Publications of the Committee on Public Information, with Dr. Guy Stanton Ford, director of the division, as editor. A representative committee of educators nominated by the National Education Association Commission of the National Emergency in Education and the Emergency Council will act as an advisory editorial board in co-operation with Dr. Ford.

V. CIRCULATION

The teachers' national service publication will be sent free to the schools of the United States. Others desiring to secure the publication may do so at a nominal price.

Methods of Silent Reading

Mr. Andrews of the Grand Rapids school system has issued a bulletin to the teachers of that city on methods of cultivating silent reading in the grades. This is a problem on which relatively little work has been done, although it has been recognized for some time that silent reading is very different in character from oral reading. Most of the books on methods have given emphasis to the school methods of securing good oral reading. Teachers have also been trained in normal schools and colleges of education in the methods of securing good oral expression, but in general the methods of silent reading have been passed over in a very superficial way.

The suggestions prepared by Mr. Andrews make an interesting beginning of a solution of the problem of teaching silent reading. It is not possible here to quote in full Mr. Andrews' circular. The following quotation will, however, give an idea of the main points which he emphasizes in regard to silent reading.

MATERIAL

The material for silent reading should be simple, so that the technique of reading will not give trouble. At the same time care should be taken in the fifth and sixth grades that the pupil does not consider the reading unworthy of serious consideration. Generally a 4–1 class can use a 3–2 book, and a 3–2 class a 3–1 book, etc. An effort should also be made to find material they have not read before, and the pupils should not be allowed to use the silent-reading book during leisure time.

Silent reading should be largely informational. History and geography stories serve the purpose very well.

As far as possible the material should be well organized. One criticism of many geography stories (although, as stated above, generally speaking this is good silent-reading material) is that they are developed with short, choppy sentences, and there are no larger units of thought about which the material may be organized.

PREPARATION

Conditions should be conducive to good thinking. Care should be taken in regard to the temperature; interruptions should be avoided as far as possible, and it should be impressed upon the pupils that this is a time of thoughtfulness and concentration. The difficulty with the average study-period is that those pupils who already read well will make good use of their time while those who are backward will waste their time. Moreover, this sort of a drill gives the

pupil the impression that silent reading requires little effort. On the contrary, it should be constantly borne in mind that skill in silent reading is the most fundamental factor in all education. In order to secure good results the teacher must be with the class and have certain definite ideals in mind.

DRILLS

Have pupils find the page where the silent-reading lesson is to begin. Definitely assign a page or two to be read silently, urging pupils to read carefully that they may be able to reproduce all that has been read. At a given signal have all the pupils start to read together. Stop the lip reading as early as possible, as this slows up the reading and certainly does not improve comprehension. When the pupils have finished the reading have them turn their books upside down on the desk and think over contents of the lesson. When about two-thirds have finished select someone to come to the front of the room and tell what has been read. Not only must all the points be brought out, but they should be developed in the same order as presented on the printed page. When the first report is finished have other pupils tell anything that has not been told. Discourage verboseness and commend accuracy and precision. Give assignments of considerable length, as teachers are often surprised at the ability of many pupils to present the contents of two or three printed pages. Again with all drills as soon as the facts have been presented the class should be given a new assignment so that as much ground as possible will be covered. In a thirty-minute period six or eight pupils ought to give reports and the other members isolated facts. The value of the drill, however, is the large amount of silent reading that will be done by all.

Make a definite assignment as in drill 1. This exercise is to encourage rapid reading. Give instructions that all are to read as fast as possible, and at the same time caution to read carefully. A good way to stimulate rapid reading is to announce that the pupil who finishes the reading first is to have the privilege of making the report. When about two-thirds have finished the reading, proceed as in the first exercise, being sure that every important point is developed.

Most teachers will agree that the rate of reading is largely a matter of habit and that up to a certain point the rate of reading may be improved without affecting the quality. In fact, it is generally thought that up to a certain point an increase in rate of reading will be accompanied by an improvement in comprehension. The explanation of this is largely that the pupil who is trying to read rapidly is concentrating more intensely than the one who makes no attempt to read the page in as short a time as possible and spends part of the time looking around the room. Of course it is to be constantly borne in mind that comprehension is the most important factor in all reading and that there is for every person a rate of reading beyond which he cannot go without diminishing comprehension.

Junior High School

One session of the High-School Conference held at the University of Chicago during the first week in May was devoted to a discussion of the junior high school and its course of study. Superintendent Shoop of the Chicago schools made the opening address and discussed the establishment in the city of Chicago of junior high schools. He gave the various reasons which led the administration of the Chicago schools to start this experiment. He called attention to the three junior high schools now organized and stated that three more will be opened in the near future. It is not the purpose of the Chicago administration to make any radical changes. The schools are to be at the outset departmentalized schools, but the changes in the course of study are by no means extreme. If the experiment proves successful in the schools in which it is now being operated, a large number of junior high schools may be expected in the future. Superintendent Shoop emphasized the fact that these schools are intended to give a larger opportunity to children who in the past have been disposed to leave school before securing a high-school education. They also make it possible for those who are going on into the high school to prepare more adequately for their work in the upper classes.

Mr. Shoop's general address was followed by a series of papers giving detailed accounts of the courses of study in various lines. Manual training in the junior high school, history, English, and mathematics were discussed by various speakers. Special discussions presented the actual practices of a number of high schools in each of the subjects indicated. The speakers also summarized the newer tendencies in regard to these courses and suggested the modifications which are necessary to improve the work.

The reception which the new junior high school is receiving in Chicago is indicated in the following editorial from the *Chicago Journal:*

> In several of the elementary schools of Chicago what are called "junior high schools" have already been organized, and arrangements have been made to extend the plan to many others. This means that the high school of a district sends back its first-year pupils to the elementary school from which they came, and that they are there grouped with the seventh- and eighth-grade

pupils into a separate unit for instruction, thus forming a sort of bridge to connect the six elementary grades with the three-year group still remaining in the high-school building.

This is a really constructive reform which has many advantages and which should be extended as rapidly as possible to cover the entire city. It will tend to keep many pupils at work in the elementary-school building a year longer than they would otherwise remain, and will encourage quite a number of these to move on to the senior high school, because they will feel that, having already begun high-school work, they might as well go on with it.

Another advantage is that it will restore to the high schools the proper atmosphere of those institutions. For it is a fact, as obvious as it is lamentable, that the average of pupils admitted during recent years to the high schools has been far below that which was the rule twenty-five years ago. There has been a steady deterioration of quality, resulting from ill-advised experimentation in educational methods, and from a dilution of the preparatory work with nonessentials, that has made the high-school beginner lag about two years behind his predecessor of the seventies and eighties.

This blight upon the system has been insidious and progressive, but everyone who has been long in the service has abundant evidence of its results.

In thus relieving the high schools of something like 40 per cent of their pupils, most of whom cannot, by any stretch of the charitable imagination, be considered as belonging in any high school, room will also be made in those now congested buildings for the superaddition of two years of college work to the present curriculum. This is the next great reform called for in the system, and no city of the size and wealth of Chicago can afford to be deaf to its insistent claim.

The path has already been shown by the technical schools and by the private foundation of Lewis Institute, and should at once be followed by the other high schools of the city.

Civics in Elementary Schools

The National Security League asks that teachers co-operate in its effort to develop material for courses in civics. The editors of this *Journal* are very glad to contribute in any way possible to the spread of the movement for civics teaching in elementary schools. They give space, therefore, both to the statement of the Committee and to its series of questions.

The majority of our people, our voters, therefore our rulers, enter industry from the grammar schools, unequipped by training to understand this government that they form and direct. Certain communities have, through experiment, established valuable courses in civics and in community history and citizenship training. By courtesy of these communities the Committee, of

which the address is given below, hopes to disseminate knowledge of this successful work throughout the country. Taking as its creed the motto of the National Security League, "Knowledge by the people is the sole basis of national security," the Committee hopes to inspire the schools of the nation to give to the children of America a thorough education in the ideals of true American citizenship.

The Committee is therefore sending out, for preliminary investigation, a civics inquiry in the hope that teachers and school officials everywhere will feel called on to send to the Committee their answers to the questions, since "in a multitude of counselors there is wisdom." This problem of citizenship teaching is a national one and can be rightly solved only by the combined wisdom and experience of the educators of the country. It is a problem which concerns everyone of 750,000 teachers who are urged to take part in the discussion. It concerns every father and mother in the country; their views are also invited. Any helpful suggestions for the teaching of patriotism and all inquiries as to matter and methods should be addressed to Etta V. Leighton, chairman of the Committee on Citizenship in Elementary Schools, Bureau of Patriotism through Education, National Security League, 19 W. Forty-fourth Street, New York City.

Civics Inquiry

1. What, in your opinion, constitutes valuable civics instruction?
2. Should civics instruction begin in the first grade?
3. Should it be treated in the early grades separately or incidentally?
4. In what grade should it be handled as a separate subject?
5. Would you favor examinations in civics separate from the history examinations?
6. Do you think civics and patriotism can be taught incidentally?
7. Is there danger that in teaching civics and patriotism incidentally the rush work in the classroom may cause such teaching to be relegated to the tomorrow which does not always come?
8. Do you think the consensus of opinion among teachers would favor a civics syllabus revision according to present needs?
9. Would you favor providing each teacher with a statement of fundamental American doctrines?
10. What, in your opinion, is the best way to teach patriotism?

RATING OF TEACHERS IN INDIANA

ELMER L. RITTER
State University of Iowa

Every teacher in the public schools of Indiana must have (1) a license or legal permission to teach, and (2) if she has taught she must have also a success grade[1] or legal mark of "schoolroom success." The license, or legal permission, is employed in most professions and its use is readily recognized, but the use of the success grade is not so universally known. If it is for the purpose of select-

[1] The Indiana law regarding success grades reads as follows:

Items for success grades.—1. The State Superintendent of Public Instruction is hereby required to provide from time to time such schedule of items as should, in his judgment, enter into the record and grading in the item of a teacher's success by the city, town, and county superintendent of schools. (R.S. 1908, No. 6296.)

Superintendents furnish items.—2. It shall be the duty of the city, town, and county superintendents of schools to visit each year the teachers under their charge and supervision, and from personal inspection and otherwise make an itemized statement and grading of the success of each teacher under their charge, and in accordance with the rules and schedule of the state superintendent of public instruction, as provided in section 1 of this act. (R.S. 1908, No. 6380.)

Issuance and record of success statement.—3. It shall be the duty of each school superintendent to issue over his signature and deliver to each teacher under his supervision, not later than July 1, each year, such a statement of the success of each as is contemplated in section 2 of this act, and shall keep on file in a permanent record book duplicates of all such statements. A teacher's success grade so issued shall be his legal success grade for one year from date of issuance. (R.S. 1908, No. 6381.)

Schedule of success items.

The teacher ..... 100 per cent

A. Teaching power ..... 45 per cent
Many items enter into this, but the principal ones are preparation of lesson, skill in presentation, and the results attained.

B. Government ..... 35 per cent
The teacher's power in government is shown in the general spirit of the school, and in the attitude the pupils take toward their daily tasks, toward each other, and toward the school property.

C. General characteristics ..... 20 per cent
Under this head the personality of the teacher, his professional and community interest, and all those qualities that make for the best citizenship should be considered.

NOTE.—The city and town superintendents should hand the success grades to their teachers not later than July 1 each year, and forward copies of the same to the county superintendents, who will keep the official record for the counties. The success grades of all teachers employed by township trustees are issued by the county superintendent.

ing successful teachers does it do it? Further, does it indicate the teacher who has not been successful as well as the one who has? Are the supervisors in sympathy with the system? Do they use it to the best advantage? In general, how do teachers rank in success in Indiana? What are the relations between success grades and other factors in teaching, such as years of experience, salary, college training, etc.? In short, what seems to be the general worth of the system as a device for selecting teachers?

Questions like these come to mind almost immediately in thinking of a rating system. They may be answered only in part in the following pages, or they may not be answered at all, but the reader will be shown some of the actual conditions in Indiana from which he may make his interpretations at will.

The problem.—The purpose of this study is to show, within certain limits, the actual conditions existing in Indiana as regards the system of rating teachers. These conditions will be shown mainly from two standpoints: (1) from the report of the supervisors responsible for the success grades; (2) from the standpoint of data on individual teachers gathered from the field by the writer.

Materials.—The data are taken for the most part from two sources:

1. Replies to a questionnaire sent out during the latter part of July, 1916, to all the supervisors who give success grades. The questionnaire covered the following points:

1. City or county, and number of teachers in your charge.
2. Number of teachers who failed, during the school year 1915–16, to such a degree as to necessitate removal during the school year.
3. The years of experience, the sex, and the kind of school taught by the failures.
4. The principal cause for the failures (in order of importance with the most important first).
5. The lowest success grade given to any teacher in 1915–16, and the highest success grade given the same year.
6. The greatest fault to be found with the present Indiana system of rating teachers.
7. The strong points.
8. How improvement could be made on the present system of rating teachers.
9. Further discussion.

2. Data gathered personally by the writer, which covered 1,765 individual teachers from 14 different school systems scattered over the northern half of Indiana. These systems range through every kind of public school from the one-room country school to one of the largest systems of the state. The specific items of investigation will appear later in connection with the second source.

3. The annual reports of the various systems to the State Department of Public Instruction were utilized.

DISCUSSION OF THE QUESTIONNAIRE

Number and distribution of failures.—Of the 298 supervisors to whom questionnaires were sent, 134, representing as many different school systems, replied with usable data, 42 counties reporting 5,459 teachers, and 92 cities reporting[1] 3,708 teachers, making a total of 134 systems reporting 9,167 teachers. The facts concerning the failures are as follows:

The total number of failures to such a degree as to necessitate removal is 69. Of these, 39.1 per cent were reported from the cities, and 60.9 per cent from the counties; 53.6 per cent of the failures were in the grades, 18.9 per cent in the high school, and 27.5 per cent were not reported in "kind of school"; 36.2 per cent of the failures were among the men, 62.3 per cent among the women, and 1.5 per cent were not reported by sex; 48 per cent of the men and 32.6 per cent of the women who failed had one year of experience in teaching; 16 per cent of the men and 20.9 per cent of the women who failed had two years of experience; 16 per cent of the men and 25.6 per cent of the women who failed had from three to five years of experience; 8 per cent of the men and 9.3 per cent of the women who failed had from five to ten years of experience; 2.3 per cent of the women who failed had ten years or more of experience; 12 per cent of the men and 9.3 per cent of the women who failed were not reported by years of experience. Some supervisors who had no removals during the year reported (without request) that they had failures whom they would not re-employ for

[1] Throughout this discussion a "city" is a corporation whose teachers are not rated in success by the county superintendent. All corporations whose teachers are marked in success by the county superintendent are counties.

another year. There were 22 failures of this type reported, which, added to 69 removals, make a total of 91 in all. The percentage of "failure to such a degree as to necessitate removal" is $\frac{3}{4}$ of 1 per cent among 9,167 teachers and is approximately the same for both cities and counties.

Buellesfield, of the University of Illinois, found 2.77 per cent of failure among 4,848 teachers, but his failures include dismissals at the end of, as well as during, the year.[1]

The principal cause for the failures.—Item 4 of the questionnaire brought the returns indicated in Table I as compared with four other studies along the same line. This table shows that the factor of discipline is of prime importance, whether considered from the standpoint of merit or from that of failure, and that teaching skill and training are close seconds, etc.

TABLE I

REASONS FOR FAILURE

(Numbers Indicate Rank)

	Ruediger and Strayer*	Buellesfield†	Littler‡	Anderson§	This Study
Discipline	1	1	1	1	1
Teaching skill and training	2	3	3	2	2
Personality	4	.....	2	3	3
Initiative and interest	3	4	4	7	4 (?)
Laziness	5	.....	6	.....	5 (?)
Ill health	Last	5	Last	.....	(Among last)

* Ruediger and Strayer, "Qualities of Merit in Teachers," *Journal of Educational Psychology*, May, 1910.

† See note 1, p. 743.

‡ Littler, *School and Home Education*, March, 1914.

§ Anderson, *Selection of Public-School Teachers* (Thesis). State University of Iowa, 1916.

NOTE.—Because no special arrangement was made for ranking, the causes of lesser importance are not absolutely placed.

Highest and lowest success grades given in 1915–16.—Table II shows the returns from item 5 of the questionnaire. To interpret this table read down to get the lower limits of the success grades, and across to get the upper limits. For example, tracing down the column of percentages at the left side of the table we come to 96 per cent; following horizontally the 96 per cent line we come to a

[1] Buellesfield, *Why Teachers Fail* (Thesis). University of Illinois, 1914.

"1" in the vertical 98 per cent column. This means that there is one system in Indiana which, according to the report of the chief supervisor, has its lowest success grade at 96 per cent and its highest one at 98 per cent. The remainder of the table is read in the same manner. The totals at the bottom show the upper limits of the 134 school systems, and those to the right show the lower limits for the same 134 systems. The following facts are found in the Table II.

The upper limit is approximately a normal distribution.

The lower limit shows two modes, meaning that there are two standards in the minds of the Indiana supervisors as regards the lower limit for rating their teachers, one at 90 per cent and the other at 85 per cent. There are also secondary modes at 92 per cent and at 80 per cent. The appearance of these modes indicates non-uniformity of marking. Although the modes are not far apart, when the entire scale of 100 is considered, they really are if the main working scale of 80 per cent to 100 per cent is used.

A few systems have comparatively short ranges through which their teachers' success grades run. One system has a range of 96–98 per cent, another 95–97 per cent, another 82–89 per cent, a fourth has 88–90 per cent. It is easy to conceive how small groups of 7 or 11 teachers could fall within these limits of success, and this happens to be true of the first three ranges mentioned. But the 88–90 per cent range has 162 teachers in it. To the average mind it does not seem possible to find so many individuals with so nearly the same ability even in the teaching profession.

It may be surprising to the reader to find that according to the Indiana supervisors there are one or more perfect teachers in at least eight systems of the state.

The comparatively short range of the success grades deserves attention. Of the systems reporting 95.6 per cent have their lower limit at 80 per cent or above, 85.9 per cent are at 85 per cent or above, the median (middlemost) point for the lower limit lies at 89 per cent, while 25 per cent of the 134 systems reporting have their lower limits at 91 per cent or above. The median of the upper limit lies in the 98 per cent group. This leaves a difference of 9 per cent or $_{1}^{1}{}_{1}$ of the 100 per cent scale between the medians of the two limits.

An interesting situation presents itself when the section on failures is contrasted with the one on highest and lowest success grades. According to Table II only 19 systems report a lower limit

TABLE II

RANGE OF SUCCESS GRADES OF 134 SYSTEMS OF INDIANA—9,167 TEACHERS
(Numbers in Table Indicate Systems)

Percentage	Percentage												Totals
	100	99	98	97	96	95	94	93	92	91	90	89	
100													
99													
98													
97													
96			1										1
95				1									1
94	1	2	4	1									8
93		3	3										6
92	2	2	5	3	1								13
91	1	1	1	1									4
90		8	12	4	1								25
89		1	8										9
88		1	6								1		8
87		3											3
86		1	9		1								11
85	2	6	9	8	1								26
84	1		1										2
83			2										2
82					1							1	2
81													
80	1	2	2	1	1								7
79													
78													
77				1									1
76													
75			1	1									2
74													
73													
72													
71													
70			2										2
69													
68													
67													
66													
65													
64													
63													
62													
61													
60		1											1
Totals	8	31	66	21	6						1	1	134

below 85 per cent, 6 systems below 80 per cent, 2 systems at 70 per cent, and 1 system below 70 per cent. Now the total number of failures reported by these 19 systems whose lower limits are below 85 per cent is 30, leaving 39 failures to be accounted for by those systems whose lower limits for success grades are identical with or above the grade required for the lowest kind of license obtainable. Here then we have shown to us the interesting and possibly significant fact *that teachers in Indiana fail to such a degree as to necessitate removal when their only legal mark of schoolroom success indicates that they are within 15 per cent of perfection.* In fact, there was only 1 failure indicated where the lower limit of the system was below 70 per cent, while there were 10 failures reported in systems whose lower limits were 90 per cent.

The greatest fault with the Indiana success system.—Of the 104 replies to this item, 20 supervisors report the greatest fault as being the lack of time for supervision, especially among the county superintendents, causing too much "guess work"; 16 report that the items in the schedule are not specific; 15 supervisors declare that non-uniformity of use is the greatest fault to be found; and 8 say that there is no scientific standard and too much personal estimate. Other faults found are as follows in order of their frequency: (1) not enough detail in the schedule, (2) a tendency to rate too high, (3) salary based on success makes it hard to rate teachers as they should be, (4) superintendents lack courage to act as they think, etc., through causes too numerous to mention.

Seemingly the greatest fault with the system of rating teachers in Indiana, as found by the supervisors themselves, cannot without question be classed as a fault of the system. "Lack of time for supervision" with its consequent "guess work" cannot be fully supplanted in any system in which personal estimate is used. If, however, these supervisors mean to suggest that the system is lacking in scientific standards, as suggested by 8 supervisors mentioned above, they are probably putting a good case. They would have a system, possibly, which eliminates personal estimate, and it is not altogether impossible that such a system could be devised. Our recent measurement of products of teaching suggests a probable means by which it may be accomplished.

The strong points of the Indiana rating system.—Only 49 of the 134 supervisors replied to this item: 11 of them thought that the strong point of the system was its potential use as a spur both by the supervisors on the teachers and by the teachers on themselves; 10 supervisors suggested that it stimulates carefulness in work; 7 others agreed that its connection with salary was a good thing and that it forced co-operation in the work outlined by the supervisors; 6 thought that its simplicity was its strongest point; 5 reported that it gave scholarship consideration and that this feature was its strong point. Other replies of less weight, according to the supervisors, are mentioned, and the following are among them: one supervisor says its strong point is its "brevity"; another says its "generality"; another that it helps a superintendent to get his teachers into a position to "overcome" examinations; another writes that its only "strong point is an organized attempt"; another says that it "has none, absolutely worthless." There is one "strong point" reported only once which we found to be used somewhat extensively: "a leverage for the superintendent."

In contrasting the "faults" with the "strong points" we find 5 supervisors who class the connection of salary with the success grade as one of its greatest faults; in the "strong points" there are 7 who think such a connection a good thing.

In the "strong points" 4 supervisors think that the success grades are good to show the teacher where improvement may be made, while 3 think that one of its greatest faults is that the teacher is unable to determine from it where her weakness lies. The 7 supervisors who think "forcing co-operation" is the system's strong point might be contrasted, with the view to explanation, with the 15 supervisors who found the greatest fault to be "non-uniformity of use." These contrasts seem to indicate a considerable diversity of opinion among the Indiana supervisors as regards the system of rating teachers which the state indorses.

How Indiana could improve her present system of rating teachers.—In this item 15 supervisors suggest that "closer supervision by persons in direct and frequent contact" (such as building principals) would be a way of improving the present system; 13 think that the

items in the schedule should be more extended and definite; 5 more have the idea that closer supervision by the regular supervisors now in charge would be an improvement; and 4 are courageous enough to suggest that better supervisors would help solve the problem. There is also the small number of 2 supervisors who suggest that a "standard scheme which eliminates partiality and guess work" would be the thing. Judging from the reports of these two, they have in mind some scientific solution of the problem. The total number of replies to this item was 43 out of a possible 134.

The further discussion.—On the whole comparatively few "further discussions" were made, but those supervisors who were moved to make them apparently spoke what was in their minds. The following quotations are fair samples: (1) "Make it a reflection on the one who gives the grade if the teacher does not measure up to it." (2) "There should be a different method of securing teachers' wages. His wages depend too much upon the mere ability to answer technical questions on a teachers' exam." (3) "I do not know how it should be done, but there should be less guess work." (4) "Arrange to give the teacher fair play under any superintendent." (5) "One difficulty is that the teachers expect that experience should warrant a raise in success grade with little regard to how effective their teaching may be. With no system of testing the results of their efforts it becomes very difficult for the superintendent to show them [teachers] what grades they really merit." (6) "If we must have success grades let the basis be *classes* and not *points* or *per cent*, and make them stand for real merit and preparation." A portion of a letter from one of the supervisors reads as follows:

> When you stop to consider that a teacher who rates 84 per cent (twenty-one twenty-fifths of perfection—and that not on a set of ten questions or a single test, but on a general estimate) is too poor to teach at all, you see how ridiculous the system becomes. In other words, a grade so high that practically no teacher in the state of Indiana *deserves* it will prevent its holder from having a school at all.

Other quotations might be made from the many at hand, but these show the general trend of them. One could easily gather from this discussion that there is some dissatisfaction present.

We have no way at hand of getting a registration of the feeling and experience from the teachers rated. Possibly this would be as valuable as the one we have obtained from the supervisors.

Thus far we have presumed to show only opinion, although in some few instances we were enabled to rise to the level of fact. In the following paragraphs we shall endeavor to present within limits the conditions with regard to success grades as they actually exist in 14 systems in the northern half of Indiana, including every kind of public school from the one-room country school to one of the largest school systems of the state.

THE RELATION OF SUCCESS GRADES TO OTHER FACTORS IN TEACHING

The data for this section (except City N) were gathered from the field by the writer personally. The data for City N were tabulated by the office clerk and sent to the writer by the supervisor in charge.

The extent and completeness of the data are due entirely to the excellent co-operation of the supervisors in charge of the 14 systems studied. The systems studied are as follows:

	Teachers
County A	135
County B	116
County C	111
County D	105
City E	339
City F	101
City G	133
City H	134
City I	77
City J	152
City K	102
City L	110
City M	88
City N	62

14 systems including 1,765 teachers
Total of county teachers is 467
Total of city teachers is 1,298

There is a possible preponderance of city teachers. This is due to limitations of time, expense, and the actual data. The county

supervisors as a rule do not seem to have at hand, in a form that could be utilized, such data as are used in this section.

Table III shows the relations of success grades to other factors of teaching. These relations were found by tabulating the data into correlation tables. For example, in showing the relations of "success grades" to "experience" the data on individual teachers were arranged according to success grades, that is, all the 100 per cent success-grade teachers were placed together, so with the 99 per cent, etc. The 100 per cent group was then arranged according to years of experience, also the 99 per cent group, and so on down. Finally these were all placed in one table arranged horizontally by years of experience and vertically by percentage of success grade. The horizontal totals show the total number of teachers for the various percentages of success grade, and the vertical totals show the number of teachers for the various years of experience. From these totals may be determined the medians (middle cases), quartiles (middle cases of the halves), and the limits. The coefficients of correlation were calculated by the method of unlike signs.[1] The relations of the other factors were calculated in the same manner.

Table III is read thus: In considering the relations of success grades and experience in teaching, data on 1,740 teachers were used. The coefficient of correlation is .75, the median (middle-most) success grade is 96.7 per cent, the median amount of experience is 8 years, the upper quartile (middle of the upper 50 per cent) is 98.2 per cent in the success grades and the experience is 15.3 years. The lower quartiles (middle of lower 50 per cent of each factor) are 94.2 per cent for success and 3.9 years for experience. In the limits we find that 100 per cent was the highest success grade given and 75 per cent was the lowest, that 56 years was the largest amount of experience anyone had, and that somewhat less than one year was the least. Likewise the other relationships may be read.

Success and experience.—The high coefficient of correlation between these factors shows that among teachers in Indiana an increase in the amount of experience is accompanied by a rise in the success grade. The ratings are all comparatively high. There is a range of only 25 per cent in the 14 systems studied: 75 per cent

[1] See Whipple, *Manual of Physical and Mental Measurements. Simpler Processes.*

of the grades are above 94.2 per cent and 25 per cent are above 98.2 per cent. The correlation table shows that after approximately 15 years of experience there does not tend to be any more improvement in teaching as measured by the Indiana system of rating teachers; after 40 years of experience the success grade tends to grow less. There were 19 cases of 40 years or more of experience.

TABLE III

TABLE SHOWING THE RELATION OF SUCCESS GRADES TO OTHER FACTORS IN TEACHING

Name of Factors	No. of Teachers	Coefficient of Correlation	Medians	Upper Quartiles	Lower Quartiles	Upper Limit	Lower Limit
Success grade and years of experience	1,740	.75	96.7% 8 yrs.	98.2% 15.3 yrs.	94.2% 3.9 yrs.	100% 56 yrs.	75% 1 yr.
Success grade and average scholarship	1,436	.65	96.7% 93.5%	98.3% 95.7%	93.9% 90.8%	100% 100%	75% 75%
Success grade and salary	1,755	.65	96.7% $78.54	98.2% $88.13	94.2% $62.83	100% $250.00	75% $40.00*
Success grade and college training	1,738	.29	96.7% 1.5 yrs.	98.3% 3.2 yrs.	94.2% 0.8 yr.	100% 10 yrs.	75% 0.3 yr.
Salary and college training	1,738	.54	$78.52 1.5 yrs.	$89.10 3.2 yrs.	$62.93 0.8 yr.	$250.00 10 yrs.	$40.00* 0.3 yr.
Salary (96–100% success group and college training)	1,066	.51	$82.50 2.1 yrs.	$99.53 4 yrs.	$75.07 1 yr.	$250.00 10 yrs.	$40.00* 0.3 yr.
Salary (75–95% success group and college training)	672	.66	$61.25 1.1 yrs.	$74.85 2.2 yrs.	$51.07 0.7 yr.	$165.00 5.3 yrs.	$42.50 0.3 yr.

* According to law $42.50 is the lowest possible monthly salary, hence this lower limit must be for a part-time teacher, but no exact assurance could be had.

Success and average scholarship.—In general, average scholarship is the average of the grades made on teachers' examinations which determined the teachers' licenses used during 1915–16. The close similarity of these factors is at once apparent. There is, however, no legal connection. This similarity exists because of the situation which governs licenses. The lowest grade license obtainable in Indiana must have at least a general average of 85 per cent. A general average is in general the sum of the average scholarship and

success grades divided by two for those who have taught, and the average-scholarship grade for those who have not taught, in Indiana. This means that neither the success nor the average-scholarship grade can be much below 85 per cent, for either would bar the teacher from holding a license and hence from the teaching profession. The license with its attributes then becomes the determining factor in making both success and average-scholarship grades. It sets practically the same lower limit for both at the outset, and in a way limits the use of both thereafter. Although by law the license is determined by the success and average-scholarship grades, it is quite easy to see how the reverse is true at least for those making a lowest grade license.

Success grade and salary.—A minimum salary is set by law for the public-school teachers of the state, and through the various classes of teachers the amount increases in proportion to the experience, success grade, training, and average scholarship, hence a high coefficient of correlation would be expected. This would be true for all those affected by the law, but for those who are paid above the minimum salary it might or might not be true. The coefficient of correlation (.65) indicates, however, that a rise in one factor tends to be accompanied by a rise in the other. This indicates that Indiana pays according to the success of her teachers. Furthermore she measures that success by her system of rating them. The median salaries for the various success-grade groups show a steady increase in salary from 92 per cent to 99 per cent inclusive. The median monthly salary of the 100 per cent group drops $20.00 from the median of the 99 per cent group.

Success and college training.—On the whole, in Indiana, success grades and years of college training (all training above high school) show only a small coefficient of correlation when compared with the coefficients of success grades and the other factors. This means that in the 14 Indiana school systems studied an increase in the amount of college training is accompanied by only a comparatively small rise in success grade. Now Indiana upholds college training by her laws, and expresses her willingness to pay for it. She has the same attitude toward her system of measuring the success of her teachers, hence it might be expected that an increase in the

one would be accompanied by at least a moderate increase of the other.

It is evident from the correlation table that college-trained teachers with various amounts of training get approximately the same success grades. The median success grade for those having one year of training is 96.5 per cent, while the median success grade for those having four years of training is 97.3 per cent. The ranges are identical, and both groups have 236 teachers.

In these 14 systems one teacher in five has 4 or more years of college training. The 100 per cent teachers range from less than $\frac{1}{3}$ year in training to 10 years. The 98 per cent teachers have the same range.

Salary and college training.—Since there is a comparatively large coefficient of correlation (.65) between success grades and salary, and a comparatively small one (.29) between success grades and college training, it was thought advisable to disclose the relation between salary and college training. The three relationships shown in Table III are: (1) the whole number of teachers studied, (2) those having a success grade within the range of 96–100 per cent, (3) those having a success grade within the range of 75–95 per cent inclusive. Perhaps this division roughly separates the group so that the upper section is not much affected by the college-training laws (having taught before the laws came into effect), hence would not be drawn into correlation because of them. The coefficient for the upper group is .51 and for the lower group .66. The groups combined have a coefficient of .54. The medians in Table III show that between the upper and lower groups there is a median difference of one year in college training, which corresponds to a median difference in monthly salary of $21.25.

Comparing the coefficients of success grades and salary, success grades and college training, salary and college training, the following situations exist:

1. The coefficient of college training and salary is .54.
2. The coefficient of success and salary is .65.
3. The coefficient of success and college training is .29.

This means that (*a*) increase in college training is accompanied by a fairly large increase in salary; (*b*) rise in success grade is

accompanied by a fairly large increase in salary; (*c*) but increase in college training is accompanied by only a comparatively small rise in success.

If increase in college training is accompanied by but a comparatively small rise in success, and Indiana is increasing her salaries for teachers as college training increases (and in a fairly large degree), it would seem that she is using an expensive plan. Indiana increases salary as success grade rises, which indicates that she places a premium on successful teaching. But if college training is accompanied by but a small rise in the success of a teacher, it would seem that Indiana has a discrepancy in her system of training teachers, in her system of rating their success, or in both.

Median success grades and total average daily attendance divided by total enrolment.—If the total number of pupils in both the common and high schools be used in a ratio as this:

$$\frac{\text{average daily attendance}}{\text{total enrolment}}$$

for each of the 14 systems studied, and expressed in percentage, and this figure is compared with the median success grades of these same systems, a coefficient of correlation of $-.17$ is found to exist. (Calculated by the Spearman foot rule.) This means that as the success grades rise there is a slight tendency for the average daily attendance to draw away from the total enrolment.

This situation is somewhat surprising, for it would seem that the more successful teaching would be accompanied by a higher percentage of average daily attendance, which seems not to be true for these 14 systems.

If the median success grades of the high-school teachers be compared with the following ratio:

$$\frac{\text{high-school graduates}}{\text{total first-year enrolment}}$$

expressed in percentage, a coefficient of $-.17$ is found to exist. In short this seems to signify that in these 14 systems a rise in the teacher's success is accompanied by a slight tendency of the number of high-school graduates to draw away from the total first-year enrolment.

If the median success grades of the high-school teachers be compared with the ratio

$$\frac{\text{high-school graduates}}{\text{total fourth-year enrolment}}$$

expressed in percentage, a coefficient of $-.23$ is found to exist. This means that, as the success grades rise, there is a slight tendency for the number of high-school graduates to draw away from the total fourth-year enrolment. Or, broadly speaking, that with the growth in success of high-school teachers comes a slightly less chance for high-school Seniors to graduate, in the 14 systems studied.

Other facts.—In the 14 systems women are slightly superior to men in teaching, as measured by the Indiana success system, the median for men being 96.6 per cent, for women 96.7 per cent.

On the whole, among 1,752 teachers, the grade teachers have the lowest median success grade, the special teachers next, the high-school teachers third, and kindergarten teachers highest. Of all teachers, 74.3 per cent teach in the grades, 18.3 per cent in the high school, 5.1 per cent in special work, and 1.9 per cent in the kindergarten.

Distribution of success grades in 14 systems.—Table IV shows the distribution of success grades throughout the 14 systems studied. At the right are the totals for percentages of success grades, and below the totals for the various cities and counties with their median success grades.

Observations and suggestions.—Finally it would seem that the Indiana system is a step in the solution of the problem of rating teachers. As one supervisor reported, "it is an organized attempt," and surely with all its seeming injustice it is better than no system. It may be that further investigation would reveal many good points which this study has failed to show.

On the other hand the incongruities thus far disclosed and the possibility of discovering others in the fields yet untouched indicate that further and much more detailed investigation should be made. The fact that 14 per cent of the teachers who failed sufficiently to necessitate removal from their position during the year have a success grade of 90 per cent or more, coupled with the facts that some

of the supervisors practically ignore the use of the system and many more use it in an extremely formal manner only, seem to suggest that all is not right.

TABLE IV

DISTRIBUTION OF SUCCESS GRADES OF 1,765 TEACHERS IN 14 SYSTEMS OF INDIANA

PER CENT OF SUCCESS	NAME OF SYSTEM														TOTAL OF CASES
	County				City										
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	
100	....	....	....	....	107	....	....	....	....	....	....	....	....	....	107
99	....	....	13	1	25	....	2	6	....	8	1	....	....	13	69
98	8	19	14	2	33	3	9	46	13	75	49	18	29	30	348
97	4	14	8	6	23	2	25	36	14	50	18	34	24	12	270
96	6	17	14	15	58	61	28	27	12	10	12	17	10	3	290
95	24	11	12	6	14	2	27	11	12	7	8	18	14	4	170
94	12	7	2	8	7	....	20	3	7	1	2	9	7	....	85
93	12	8	8	6	17	2	6	1	7	....	6	3	2	....	78
92	13	6	4	22	15	....	10	....	9	....	3	8	1	....	91
91	2	7	5	15	7	26	1	....	....	....	1	1	....	....	65
90	16	11	11	13	18	....	1	3	2	1	2	2	1	....	81
89	1	5	1	5	10	....	2	1	1	....	....	....	....	....	26
88	34	7	11	6	2	....	1	....	....	....	....	....	....	....	61
87	....	2	4	....	1	2	1	....	....	....	....	....	....	....	10
86	1	2	4	....	1	3	....	....	....	....	....	....	....	....	11
85	....	....	....	....	1	....	....	....	....	....	....	....	....	....	1
80	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
75	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Total	135	116	111	105	339	101	133	134	77	152	102	110	88	62	1,765
Median (per cent)	92.9	95.3	95.5	92.6	97.8	96.3	95.9	97.6	96.1	98.1	97.9	96.7	97.4	98.4	96.7

If one thing looms up larger than any other it is the realization that before we can make any satisfactory check on the teacher's work we must be able to measure the "products" of her teaching and must have some common standard or standards by which to do it. This is the task yet to be done. This study has only begun the investigation. It has presumed to show conditions only, and from but two standpoints. It is left for future investigation to make further attacks on the problem and to obtain definite, positive recommendations which Indiana may use to rate more efficiently her splendid corps of teachers.

DEVELOPMENTAL ALEXIA: CONGENITAL WORD-BLINDNESS, OR INABILITY TO LEARN TO READ—*Concluded*

CLARA SCHMITT
Department of Child-Study, Chicago

With the cases described in the May number it was not possible to give any specialized help. Those who had extra instruction in reading had it only as a matter of quantity. The methods pursued were the same as are followed in all first grades without any change of method so far as the writer could learn. Cases 9, 10, 11, and 12, were placed in a special room with a teacher who had given special attention to methods of teaching reading. This placement was possible because all these children were found in the same school. In no other instance was more than one such child found in a school, and it was not considered expedient to place the child with subnormal children. In these cases it was felt that no injustice would be done, since a large part of the members of the room were not definitely subnormal, but backward for a variety of reasons. Some of the backward ones were as poor in reading as the subjects of this article, but from physical or other causes. The room was given in charge to Mrs. Lelah C. Russell. Mrs. Russell's account of her method is given, condensed from an article read by her before a teachers' meeting.

Learning to read is the child's all-important task when he enters school life. This task must be made interesting and a genuine pleasure. Sense training, games and plays, imagination and reasoning, are the avenues through which the quality of interest in the reading process is obtained. The love of play should be provided for by the introduction of lessons that are to be read silently and acted before being read orally. The play interests should be correlated with the work of learning to read, and the reading matter, then, should be full of action, the action of real life. The first words of sentences presented to the child should be ones for him to act.

On cards 3 inches by 4 inches print a number of action words in large type. On the other side of the card write same word in large script, as "run," "fly,"

"come." "walk," "jump," etc. Present the printed card to the class and write the word on the board in a large hand, thus presenting both print and script simultaneously. Call upon some child to do what the word says. If you happen to have a child who was in the first grade the year before ask him to act the command. Then have the child tell what the word told him to do. If you have no pupil in the class who knows the word, you may call a pupil to the front to act as teacher and ask you to act the word. Then have the child tell you what the word told you to do. Have a number or all the pupils to act the command, erase the word from the blackboard and rewrite it for each child to act. Very soon all action words will be recognized by sight. Later print short sentences to be acted, as, "run away," "come to me," etc. Be careful in preparing these lessons to preserve the continuity of thought. Mere isolated sentences scatter the interest, directing the mind first to one subject then to another, diverting the interest instead of holding it. After taking up a dozen words or so the sentences should be conversational. Along with this work and beginning with it the phonic side of reading should be taken up. The easiest sounds should be taught first. The easiest are those which can be prolonged indefinitely, such as, *r, f, l, m, s*. In the effort to make the work interesting and enjoyable the phonics are presented in a story, associating each sound with parts of the story. The story is told as a serial, stopping at an interesting point at the end of each period. The capital and small letters of the alphabet are printed on cards, one to a card, including the combinations *sh, wh, th, ch*. On the reverse side of the card the capital and small letter are written in script. The story goes as follows:

When I was a little girl just about as big as you little people, we lived on a farm. My brother, who was two years older than I, had a dog whose name was Spot. I had a dear little kitten, Tabby. One day Bert, my brother, and I were playing in the orchard. You know what an orchard is, don't you? Yes, that's right, it is a big yard full of fruit trees. Now can you guess why we liked to play in the orchard? Yes, that's right, you know little boys and girls like cherries and apples.

All at once we heard old Spot saying "r, r, r." Did you ever hear a dog growl like that? (show letter) What did he say? (write letter on board) (Children keenly interested repeat "r, r, r," associating the sound with the letter.) We ran quickly to the place from which the sound came and what do you think? There was Spot standing on his hind legs with his forepaws stretched high up on the tree still saying (present card r).

Bert laughed to see old Spot but I cried when I looked up in the tree and saw my Tabby with her back arched like a Hallowe'en kitty and her tail twice as big as it ought to be saying "f, f, f" (show card and write letter on board). I made Spot get down and scolded him for frightening my kitty. Bert climbed up into the tree and handed me Tabby. While he was getting her he spied some ripe cherries. He ate so many and ate them so fast that he swallowed a seed and while he was trying to get it out of his throat he said "c, c, c" (present card, etc.). So he came down and didn't eat any more cherries.

Just then we heard mother ring the bell, which meant that dinner was ready. It said "l, l, l." We all scampered to the house. When we got there Spot was very tired. I heard him say "h, h, h," so I knew he wanted a drink.

Mother told Bert to go to the barn and feed old bossy cow who had been saying "m, m, m" for a long time.

The story goes on in this fashion day after day, each lesson reviewing sounds already learned and adding new ones. Simultaneous with the teaching of phonics should be taken up the training of the ear in the analysis of the sounds of form words. Give a few ear-training sentences: "F-old your hands," "F-old your arms," "R-un to me." Have the sentence acted by individuals and the class. Then spend some time in pronouncing out the sounds of phonetic words alone, not in sentences, and have the pupils tell the word which they make.

When the ear has been trained to hear words when sounded, proceed with graphic word building. This training is carried on by writing phonic words on the board and have the children blend and pronounce. The Aldine Chart is very helpful for this drill or one may print lists of phonetic words on strips of cardboard, such as all words ending in the phonograms *at*, *an*, *all*, *et*, etc. A list of such words is as follows: "at," "bat," "cat," "fat," "rat," "mat." The child learns the phonogram or "family" *at* with which other sounds may be combined.

The various lines of training are carried on at the same time. During the day, at one period action sight words are being learned, at another ear training is given etc.

Mrs. Russell's method, as the writer has gleaned from observations of her work with the class, is, in short, to build up in the child's mind a complex of associations with which to connect up the new matter taught. The foregoing description of the method only palely portrays the constant vividness with which sounds and words are associated with experience and ideas already possessed by the child, and the devices for giving the child motor or other experience in connection with the reading to be taught.

The four children given her during the first six months of their residence in the special room showed a good beginning in the mastery of phonics as may be seen from the detailed reports of their reactions to the reading tests. They had gained in that time about the same in reading ability as is gained by first-grade children in the first half-year of their school life. Since they had gained almost nothing in their previous school life and had been making no observable progress up to the time of their residence in the special room, the new acquisition must be credited to the specialized teaching received there. After this period of residence the children showed a different quality in their reactions to the reading tests.

It was as though they had learned that this process was one with which they could cope, and they, therefore, worked at it with apparent confidence in their ability to master what was given them. The other children upon being asked to read showed a feeling of despair or a sort of discouraged resignation to an impossible attempt.

Case 9: Girl.—Age ten years and six months when first seen in April, 1915. She had been sixty-nine weeks in the second grade. She had acquired second-grade arithmetic, but the reading was so poor that her teacher desired that she be placed in the special room. Physically she was a plump, well-nourished child, but with hands so moist as to be almost dripping. Along with this she showed a certain amount of nervousness, wriggling and twisting continually, nervously inattentive at times, but could at times when interested in tests fasten herself down and work out the problem with continuity of attention. A brother of twelve years was a very nervous and erratic boy, but not mentally subnormal. He was in the fifth grade and had to repeat half-grades several times, but then always got through. A sister of fourteen had very poor vision which could not be corrected and was for this reason doing little school work. A brother of seven is Case 10. She did the Construction Puzzle B of the Healy-Fernald Series with no error, and cross-lines A and B at the first attempt. She read Selection A in 3 minutes and 20 seconds with five errors. With the first sentence of Selection B, she could not pronounce "Bliss," "manager," "northern," "spectator," "planting," "potatoes." At this time it was the opinion of the examiner that the child's backwardness in school probably was due to the nervousness and consequent lack of concentration of attention.

She was seen again in September, 1915, a member of the third grade, and was doing well with the arithmetic and other work of the grade. The reading had not improved. Her teacher said that she had not noticed that her control of attention was poor. She found her always attentive and diligent with the work which was possible for her to do without reading ability.

She was seen again in January, 1916. She was making good progress in the work of the grade. The teacher reported again that

the child applied herself well but there was no improvement in reading ability. She was then recommended for residence in the special room.

She was seen again in June, 1916, after nearly six months of the kind of instruction described. She read Selection A in 1 minute and 15 seconds with no errors. She had not seen it since her last examination and since leaving the first grade had seen it only upon such occasions. Read Selection B in 9 minutes and 26 seconds, spelling out correctly such words as "heard," "turning," "became," "dimly," "villages," "wandering," "quickly"; failed with such words as "proprietors," "spectator," "conscious," "neighbors," "continued." She was continuing her progress in arithmetic. At this time she did the code test with four errors, which shows fair ability at concentration of attention.

She was seen again in December, 1916. She read Selection B in 9 minutes with a phonetic ability not especially better than at the time of her last examination. At this time the child left the school without leaving the address of her new home and has not since been located.

Case 10: Boy.—Age seven years and six months when first seen in April, 1915. Brother of Case 9. He had then been in the first grade for seventy weeks. Physically he was in very good condition. He showed much of the same nervousness as characterized his sister. He knew as much of the number work as could be expected of a child with only first-grade experience. He showed a tendency to talk much. When doing tests he would go off on tangents of discussion, and because of this frequently missed the point through this type of inattentiveness. By reason of this he failed in the counting-backward test, though he got part way correctly several times. He failed with the Healy-Fernald Construction Puzzle B, but after being once shown did it again immediately with the board turned upside down with reference to its previous position without error. He gave good answers to the difference test. He answered five of ten easy opposites correctly; gave four of the other five correctly with the stimulating question, *If a thing is not—then how is it?* He could, however, always be brought back to the problem at hand, and during the time when attention was

controlled good results were apparent. In reading he could recognize possibly five words unerringly. He had no idea of phonics.

He was seen again in January, 1916. There was no improvement in reading, and he was recommended for the special room.

He was seen again in June, 1916. He read Selection A with errors for only four of the words. He pronounced "saw" "was," and could not get it correct phonetically; pronounced "some" correctly, and then wished to verify it phonetically but could not because it is not phonetically logical. He had the same difficulty with "were." He read the first sentence of Selection B in 4 minutes and 35 seconds, working out phonetically correct "fine," "spring," "morning," "year," "about," "ten," "near," "Amos," "Bliss," "have," "been," "seen," "behind," "his." He failed with "proprietors," "northern," "spectator," "might," "planting," "potatoes."

In December, 1916, this child suffered an accident and was out of school for a long time and then left the district and was not located again. His teacher reported that he had continued to make progress in reading, and before he left her was quite independent with the phonics of difficult matter.

Case 11: Boy.—Age seven years and three months when first seen in January, 1916. He had been in the first grade for fifty-seven weeks. Physically he was in very good condition, a strong, healthy-looking child. No other member of the family was in school. His teacher reported him as very good in the handwork of the grade. He knew much more of number work than was taught in the first grade at that time. His reading accomplishments consisted of the ability to recognize possibly a few words. He counted backward from 10; gave answers to the difference test in good, clear sentences; did the Healy-Fernald Construction Puzzle B with thirteen errors—not a bad record. He did cross-line A at the second attempt; failed with cross-line B. He gave correct answers to five of ten easy opposites, answered three of the other five with the stimulating questions, and did not know the opposite of "truth" and "sad." He did not name the color gray, but called it "light black," and called orange "pink." He was placed in the special room.

When seen again in June, 1916, he read Selection A in 9 minutes and 45 seconds, spelling out most of the words phonetically correct but not conventionally correct. For instance, the words "find," "fine," "like" were pronounced with short *i*. He was unable to work out such words as "hungry," "said," "could," "grapevine," "high." He was able to recognize these words when they occurred a second time in the selection, the examiner having pronounced them for him at his first failure. He was making normal progress in other subjects of the school work. He left the city soon after this time and was not seen again.

Case 12: Boy.—Age eight years and eleven months when first seen in January, 1916. He had then been in the second grade for twenty-six weeks and before that fifty-four weeks in the first grade. Physically he was in good condition—a strong, healthy-looking child. The aunt with whom he and his mother live said that he had typhoid fever at five years, children's diseases in mild form, but had in general always been a healthy child. In most tests of reasoning and thinking ability he showed himself to be very apt. He did Construction Puzzle B of the Healy-Fernald Series with one error; failed, however, with the cross-line B. He succeeded with the absurdities test of the Terman ten-year set. He was reported by his teacher as very good in number and hand-work, neat and reliable and diligent. His reading accomplishment consisted of the ability to recognize only a few words, with no knowledge of phonics. He was recommended for the special room.

When seen again in June, 1916, he read Selection A in 9 minutes and 49 seconds, failing to recognize such words as "could," "grapes," "high," "knew," "better." He spelled out phonetically correct "grapevine," shortening the vowels, "air," "those," "get," "last," "not." At this time he did cross-line A and cross-line B correctly at the first attempt. He had made normal progress in number work.

When seen again in December, 1916, he read Selection A in 3 minutes and 12 seconds without any mispronunciations but studied many of the words carefully before pronouncing them. He read the first sentence of Selection B in 3 minutes and 30 seconds, working out correctly "spring," "year," "about," "ten," "Amos," "Bliss," "manager," "proprietors," "northern," "spectator," "garden,"

"planting," "potatoes." He wrote correctly from dictation, "The cat ran away." When asked to write "The printer made some cards," he wrote "The printr made som cards." Before writing the unfamiliar words he dissected them phonetically, audibly. He had made normal progress in the number work and other subjects of the school curriculum.

He was seen again in February, 1917. Unfortunately his record with Selections A and B has been lost. His record with the reading test of the ten-year group of the Terman Scale is as follows: Time, 3 minutes and 15 seconds. Spelled out phonetically correct "September," "fire," "near," "center," "families," "saving," "burned," "hands"; missed only one word in the selection. Gave an adequate account involving eight items. He showed his quickness of comprehension in his reaction to tests in many ways. For instance, when given the Healy Apperception Test, before an explanation could be made of the meaning of the test, he had glanced over it and remarked, "Oh, this is easy. I see how it goes," and proceeded to fill the requirements of the test without any error.

Case 13: Boy.—Age seven years and nine months when seen in February, 1917. Brother of Case 12. He had just been placed in the second grade after two years' residence in the first. His teacher reported that he was especially good in construction work and in games, and the special teacher of drawing was enthusiastic about his ability in that subject. His ability with the number work of his grade was good, and his number accomplishments were in advance of what might have been expected from the teaching he had received in the first grade. He did Construction Puzzle B of the Healy-Fernald Series with fifteen errors. He did cross-lines A and B at the first attempt. Physically he was in good condition. His aunt reported that he had had typhoid at three years of age, the usual children's diseases in mild form, that he was artificially fed in infancy and that the food did not agree with him until about three months of age, from which time on he had been healthy. He was able to recognize about twenty words in the first pages of his reader. He had no knowledge of phonics. He was placed in the special room, and has not since been seen.

The foregoing data suggest a cause for inability to learn to read differing much from the generally accepted one. The cause assigned by most writers indicate a lesion in brain structure and is termed variously, "biologic variation," "phenomenon of atavism," "lack of development of left angular gyrus." Rieger assigns the condition to the field of general intelligence; Voss's free association experiment and Jackson's discussion suggest the same. Among those who entertain the idea of lesion of the reading center some have assigned the recognition of figures and musical characters to different centers than that for reading, since most congenital word-blind cases can recognize one or both of these types of symbols.

In the light of the reading ability developed by the children who received special teaching, one must doubt the theory of a specialized brain center lesion. We must assume in case of the lesion theory that, in the brain of the congenital word-blind child who has learned to read, connections with some other group of brain cells has been made by the stimulus-receiving center involved and that the new center then took over the specialized function of storing word images, a conception not in line with the trend of current thought concerning imagery; or that the center biologically set aside for this purpose has undergone a development of some sort. The latter is, of course, untenable.

The question which may be raised in objection to the former assumption is, How can the calling into function of a new center by the four children of different ages at the same time be accounted for when they had shown no such tendency during all their previous school history? There was in the special room no greater stimulus to learn to read than was supplied in the regular rooms; no greater amount of time was given to the subject except in so far as the class was smaller and each individual received more of the teacher's attention. All the children had been anxious to learn to read and were conscious of their failure to do so. The fact is that they all, with only slight variations, reacted in the same way to a new method. The writer has had frequently to maintain that the method is new in the face of objections from teachers with whom this matter has been discussed. They say that they all use

the same method as was found successful with these children. Observation, however shows this not to be the case. Every teacher uses it to some extent, but to a very slight extent. It is not necessary with the usual first-grade child. The average child quickly learns to associate the printed letters and words with their vocal prototypes without the need of much trimming in the way of method. The extra devices to help the formation of such associations occupy about the same place in the usual teaching of reading as does the occasional humorous story in a serious lecture. It is, then, the unusual child who persistently fails to make the associations.

This failure on the part of a child who is otherwise normal may be related to the psychology of meaning and association. We know that the complex which goes to make up that mental quality termed "meaning" and associated with all percepts is composed of the many factors of experience in connection with the particular percept. It is made up of memories of smell, taste, color, tactual qualities, kinaesthetic experiences, relations to other objects of perception, etc. Along with these experiences and knitting them into a functional whole are the ideas of the individual's past and present purposes with reference to the object of perception. When a certain such complex has been repeated in its entirety many times it is probable that in many instances a mental set or attitude is formed and, becoming habitual, may be closed to the admission of additional factors whose addition would make necessary a reconstruction of the percept complex and the formation of a new attitude. This is commonly known to be the case with complex motor processes. A person who has formed a certain motor habit can only with difficulty or not at all reconstruct it, as witness inefficient golf, typewriting, handwriting, piano playing, etc.

Most books in beginning reading have for their first lessons the "I see a cat" type of material. This is for the purpose of connecting with the experiences and interests of childhood. The child's already-formed percept of cat is made up of certain experiences of furriness, scratchiness, color, etc., together with play purposes, its relation to the house, other pets, and a host of other ideas which have become a complex whole and which when called up brings with it a certain attitude or set of the whole mental organism. The new experience

of the printed "cat" may not find lodgment in this already-formed mental habit percept "cat." That it does so in the preponderance of cases is evidence of juvenile mental plasticity. The children who exhibit the characteristics of congenital word-blindness have minds which have become set in certain respects. They may not be set in all such ways as would eliminate all printed language. This is shown by the fact that in nearly all cases reported there was ability to recognize figures and in some ability to read music. The explanation for this is that there were few or no experiences with number and music before the symbols were presented and therefore no habit percept formed. The printed symbols of such subjects is, with most children, presented along with the child's other experiences with the subject-matter and thus are made a part of the habit percept complex. One case reported learned to read Latin readily while still finding much difficulty with English. This case may be explained in the same way. Latin words and their printed symbols went to form a new percept and did not necessitate the rearrangement of old ones. For the same reason Case 2 learned to read material in connection with his electrical work.

These same children fail to learn the phonics necessary to the reading process because the already-formed speech motor habits have never been subjected to such processes of synthetic analysis as accompanies the learning of phonics and have never consciously been applied to such uses.[1]

The method pursued with Cases 9, 10, 11, and 12 was such as to build up a background of logical association—the panting of the dog, the mooing of the cow, etc., which, however, had to be appealed to many times before the association of the sound with the symbol became automatic. It was a frequent occurrence to hear the teacher say, when recognition became hesitant, "That is the tired sound; what the cow said," etc.

It is quite probable that many children have the same type of difficulty who do not come to notice because it is much less in

[1] Whatever may be said for the word and sentence methods it is really by the phonic method that children learn to read. The first two are useful as a part of the beginning instruction to show that reading has meaning, says something, as one hears the expression frequently used by teachers. It is only by the phonic method that the child becomes independent of the teacher.

degree or associated with other causal factors. The writer is convinced that children coming from homes speaking a foreign language encounter difficulties in learning to read English which cannot be accounted for wholly on the basis of having to learn a new language. Many such children have been found who could not read, who would talk little or none in school, but who would describe that favorite game of the slums, "Coppers and Bums," or other such vital activities in their own fluent street patois. The English of the school, in these cases, does not become associated with the meaning complexes of their lives. The same difficulty has been found to exist among the colored children now coming to the city from the rural districts of the South, where little educational opportunity exists. Some of these children, proving upon examination not to be mentally defective, attend school for long periods before beginning to take hold of the work.

The condition here discussed is, however, only one of many factors which combine to determine school progress.

Because of the foregoing considerations the term proposed by Jackson, "developmental alexia," is much more suitable than the one in general use.

ADDENDA

Since the foregoing discussion was prepared the work of Dr. Augusta Bronner entitled *Psychology of Special Abilities and Disabilities* has become available. Part of chapter vi on "Special Defects of Language Ability" is devoted to disability in learning to read (pp. 76–110). Dr. Bronner does not accept the explanation for this phenomenon advanced by medical men. She discusses five cases. Her Case 14 was poor in auditory memory and perception. He could not readily reproduce five digits; could not pronounce "Constantinople"; could not enunciate clearly; had no knowledge of phonics. Case 15 was poor in visual memory. Dr. Bronner thinks that this may be the cause of his inability to learn to read. She says, "In reading naturally it would be most difficult to convert all the pictures of various words into other than visual terms, hence the boy's great failure in this whole field." For the failure to learn to read on the part of the other cases reported no reason is indicated.

One may say in criticism of the reason advanced for the failure of Case 15 that it is doubtful if imagery plays a significant function in the process of learning to read. The process in its developed form consists of certain habit speech motor responses to certain visual stimuli. The process can conceivably be developed without calling into play to any great extent the power of visual imagery.

Case 12 has been returned to the regular grades and will complete the work of Grade IV by the end of the year. There is no reason to expect that he will not continue to make normal progress. Case 13 is doing the work equivalent to Grade III in the special room. When seen recently he read the reading test of the Terman Scale in 3 minutes with two errors, carefully working out the unfamiliar words phonetically.

THE USE OF THE WOODY SCALE FOR DIAGNOSTIC PURPOSES

C. J. ANDERSON
Superintendent of Schools, Stoughton, Wisconsin

So much attention has been given to the measuring value of the various standard scales and tests that another property of such scales of far-reaching importance frequently has been overlooked. It is doubtless true that when these scales are applied to a school system such products as amounts of overlapping of grades, individual variations in ability, grade medians, room medians, etc., should be utilized. Nevertheless, in most instances, the scales have not been used to diagnose the difficulties involved in the processes which they are attempting to measure. From the standpoint of improvement in teaching such a diagnosis can be made of more value to a school system than the usual efficiency rating resulting from the application of these scales. It is precisely for this reason that the writer believes the Freeman Handwriting Scale to be of greater value in the improvement of a pupil's handwriting than either the Ayres or the Thorndike scale. The former indicates which element of the complex process needs attention, the latter measure legibility or quality, both of which are quite complex. If a teacher wishes to secure better results in long division, it is more valuable for her to know what kinds of errors cause a pupil to be weak in this process than it is to know that, measured by standard achievement in division, the pupil belongs in the fifth grade.

It is the purpose of this article to record the results of a study in which the Woody Scale in Division was used, both in rating the division work of pupils and in ascertaining what kind of errors pupils make in division. The second part of this study was made because the teachers were dissatisfied with the results shown by the scale, and wanted to know how the teaching in division could be improved.

The Woody Division Scale, Series A, which follows, was selected because the problems are arranged in the order of their increasing difficulty, and because the steps of difficulty between problems are approximately equal. The tests were given and the papers were scored by two "special-help" teachers, neither of whom has any regular classroom work, and both of whom have had some training in giving and scoring educational tests. The instructions given in every case were as follows:

When ready to give the test, have monitors distribute the test sheets, placing one on each desk, *face downward*. On the blank side of the paper have each pupil write carefully in the upper left-hand corner the date, the name of his school, the name of his town, his teacher's name, and the name of the person

Series A

DIVISION SCALE

By Clifford Woody

Name.....

When is your next birthday?.....How old will you be?.....

Are you a boy or girl?.....In what grade are you?.....

(1) $3\overline{)6}$ (2) $9\overline{)27}$ (3) $34\overline{)28}$ (4) $1\overline{)5}$ (5) $9\overline{)36}$ (6) $3\overline{)39}$

(7) $4 \div 2 =$ (8) $9\overline{)0}$ (9) $1\overline{)1}$ (10) $6 \times \quad = 30$ (11) $2\overline{)13}$ (12) $2 \div 2 =$

(13) $4\overline{)24 \text{ lbs. } 8 \text{ oz.}}$ (14) $8\overline{)5856}$ (15) $\frac{1}{4}$ of $128 =$ (16) $68\overline{)2108}$ (17) $50 \div 7 =$

(18) $13\overline{)65065}$ (19) $248 \div 7 =$ (20) $21.\overline{)252.}$ (21) $25\overline{)9750}$ (22) $2\overline{)13.50}$

(23) $23\overline{)469}$ (24) $75\overline{)2250300}$ (25) $2400\overline{)504000}$ (26) $12\overline{)2.76}$

(27) $\frac{7}{8}$ of $624 =$ (28) $3.\overline{)093.6000}$ (29) $3\frac{1}{2} \div 9 =$ (30) $\frac{3}{4} \div 5 =$

(31) $\frac{5}{4} \div \frac{3}{5} =$ (32) $9\frac{5}{8} \div 3\frac{3}{4} =$ (33) $52\overline{)3756}$

(34) $62.50 \div 1\frac{1}{4} =$ (35) $315\overline{)37722}$ (36) $9\overline{)69 \text{ lbs. } 9 \text{ oz.}}$

giving the test. Follow this order in giving the foregoing information. Next, have the pupils turn the papers over and fill out the blanks at the top of the page, each pupil turning his paper back again promptly as soon as he has finished this. When all are ready for the test, instruct the pupils that, when the signal is given they are to turn the papers over and solve as many problems in twenty minutes as they can, being sure to get them right. Explain that all the problems are division problems. (The problems may be called "into" problems if the pupils are more accustomed to this term.) Instruct the pupils that they are to use this sheet only to figure upon, not to use scratch paper, and to work out the problems just as if they were working them on the blackboard. Pupils should also be told that as the figures on the reverse side are printed they will need to make their figures smaller than usual. If the pupils are not familiar with the division form used by the author, this should be explained and the pupils told they may use any form to which they are accustomed. Be sure to allow *exactly* twenty minutes. Have pupils hold up their pencils when the signal "Stop" is given. If any irregularities occur, as they unavoidably do at times, these should be noted, the paper or set of papers marked, and sent in with the rest

The method of scoring the problems is indicated in Table I. The vertical column at the extreme left contains the serial numbers of the problems. The horizontal column at the top indicates the pupils by numbers. Under the numbers of the pupils are found black crosses indicating that the problem was worked correctly, black ovals indicating an incorrect operation, and blank spaces indicating no attempts. The remaining data are self-explanatory. A similar sheet was used for each room. From these tabulations the data for Tables II and III were obtained.

Table II gives the distribution of pupils' scores for the entire school system. This table is to be read as follows: In the fourth grade one pupil worked 2 problems correctly, one worked 5 problems, three, 6 problems, etc. There were 88 pupils in the fourth grade, 100 in the fifth grade, 93 in the sixth grade, 83 in the seventh grade, and 41 in the eighth grade. The city medians are shown on the bottom line. This table was used as the basis for Figs. 1 and 2.

Figure 1 shows graphically the median for each grade of each school and the medians for the city grades as a whole. The medians of the grades for the entire city show a steady increase up to the seventh grade. There is practically no increase in ability to perform division operations beyond the seventh grade. The South

TABLE I

Subject *Arithmetic* Author *Woody* Series *A* Test *Division* City *Stoughton* Number of papers, *35*
School *Central* Grade *A* Date *Nov. 1, '17* Teacher *Kidney* Scored by *Rynning* Class median, *13*

Number of Questions	Value	Pupils by Number																																						Not Correct	Correct	Distribution of Pupils According to Number Questions Correctly Answered	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	Total	Total		Total
1	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	o	x	o	x	x	x	x	x	o	x	x	x	x	x	x	x	o	o						7	28	o	
2	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	x	o	x	x	o	o						3	32	1	
3	1	x	x	x	x	x	x	x	o	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	x	x	x	o	x	x	o	x						6	29	2	
4	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	x						0	35	3	
5	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	o	x	o	x	x	o	x						4	31	4	
6	1	x	x	x	x	o	o	x	o	x	o	x	o	x	x	x	o	x	o	o	o	x	x	x	x	o	x	o	x	o	o	o	o	o						19	15	5	1
7	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	o	x	x	x	o	x	o	x	x	x	x	x	x	o						3	32	6	1
8	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						1	34	7	
9	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x						1	33	8	4
10	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	o						2	33	9	2
11	1	x	x	x	x	x	x	x	x	x	x	x	x	x	o	x	x	x	x	x	x	o	x	o	x	o	x	o	o	o	o	o	x	o						10	24	10	1
12	1	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	o	x	x	o	x	x	o	o	o	x	o	o	x						8	26	11	3
13	1	x	x	x	x	x	x	o	x	x	x	x	x	x		x	x	x	o		o	x	x	x	x	x		x	o	x	o	x	o	o						4	23	12	6
14	1	x	x	x	x	x	x	x	x	o	o	x	x	x		o	x	x	o	x	o	x	o	o	x	x	o	x	o	o	o	o	o	o						12	18	13	2
15	1	x	x	x	x	o	o		x		x	x	x		o	x			o		o			o	x					o				o						7	9	14	8
16	1		o	o			o				o	o	o	o			o	o	o		o			o	o		o			o				o						15	o	15	3
17	1	x	x	x	x	x	x	x	o	o	x	o	o	o	x	x	o	o	x	x	x		o	x	o		o		x	o		o		o						12	15	16	2
18	1		o				o					o	o	o			o	o	o								o			o				o						10	o	17	1
19	1	x	x		o	x	x	x	x	x		o	o	o		o	o	o	o	o			o				o		x	o				o						12	7	18	1
20	1	x	o				o					o	o			o	o	o	o								o	o		o				o						10	1	19	
21	1						o					o	o				o	o	o								o	o												6	o	20	
22	1	o			o	o	o	o	o	o		o	o	o		o	x	o	o				o				o	o		o										16	1	21	
23	1						o					o	o		x			o	o								o	o												6	1	22	
24	1														o			o	o																					3	o	23	
25	1															o			o																					2	o	24	
26	1	o													o				o								o													4	o	25	
27	1															o																								1	o	26	
28	1														o	o																								2	o	27	
29	1															o																								1	o	28	
30	1															o																								1	o	29	
31	1																																							0	o	30	
32	1																																							0	o	31	
33	1																										o													1	o	32	
34	1																																							0	o	33	
35	1																																							0	o	34	
36	1															o																								1	o	35	
Total not correct		2	3	1	2	3	8	2	4	3	3	9	6	1	7	9	8	10	13	3	4	2	5	5	5	3	11	4	7	11	4	7	4	1	6	14							Total	35
Total correct		18	17	16	—16	15	15	15	14	14	14	14	14	14	14	14	13	13	12	12	12	12	12	12	12	11	11	11	10	9	9	8	8	8	5	6								

School is above the city median except in the fourth grade. The West School follows closely the city median; the Central School falls below in the sixth grade. The fact that the high

TABLE II

DISTRIBUTION OF PUPILS' SCORES

No. of Problem	Grade				
	IV	V	VI	VII	VIII
1		1			
2	1				
3					
4					
5	1				
6	3	1			
7	1	1			
8	11	2			
9	7				
10	5	9	2		
11	12	7	3		
12	11	6			
13	8	9	1	1	
14	13	3	2		1
15	5	2	2		1
16	3	7	4		1
17	1	10	4		
18	2	2	4		
19		12	2	2	
20		6	8	2	2
21		9	6	1	
22		8	9	6	
23		2	12	1	
24		1	11	3	1
25		1	9	2	1
26		1	5	8	1
27			3	3	2
28			3	9	3
29			1	5	3
30				5	4
31				9	3
32			1	15	6
33				5	3
34			1	2	5
35				3	2
36				1	1
Total	88	100	93	83	41
Median	12.3	17.2	22.5	29.8	30.0

medians in the fifth and sixth grades of the South School do not influence the city medians materially is due to the relatively small number of pupils in each grade of this school. This fact may also

account for the high median, for the teachers can give more time per pupil to the grades. In the Central School departmental teaching is maintained in the fourth, fifth, and sixth grades. One

TABLE III

SHOWING NUMBER OF TIMES EACH PROBLEM WAS WORKED INCORRECTLY

No. of Problem	Grade					Total City
	IV	V	VI	VII	VIII	
1	13	13	3	1	1	31
2	8	2	.....	.....	.....	10
3	11	6	3	2	.....	22
4	13	9	5	4	1	32
5	12	.....	2	1	.....	15
6	62	37	11	5	.....	115
7	9	21	5	2	3	40
8	16	6	2	1	3	28
9	11	10	9	10	7	47
10	7	4	8	3	2	24
11	27	24	3	1	5	60
12	26	33	26	21	11	117
13	29	16	8	2	.....	55
14	37	24	12	6	3	82
15	28	27	9	5	1	70
16	26	42	25	14	7	114
17	34	55	22	8	7	126
18	23	50	22	17	11	123
19	43	40	24	21	8	136
20	26	43	61	11	11	152
21	26	53	35	18	7	139
22	45	60	28	13	6	152
23	.....	45	28	14	4	91
24	.....	52	28	19	8	107
25	.....	40	31	29	13	113
26	.....	57	37	18	11	123
27	.....	38	46	19	12	115
28	.....	60	58	26	9	153
29	.....	45	52	43	15	155
30	.....	44	59	41	15	159
31	.....	26	54	45	16	141
32	.....	20	37	32	11	100
33	.....	47	49	28	13	137
34	.....	12	23	47	15	97
35	.....	40	54	29	12	135
36	.....	38	57	66	23	184

would conclude without this graph that departmental teaching in arithmetic should result in better work and a higher median. This conclusion does not hold true. Either the departmental teacher is not efficient, or departmental work in arithmetic is not superior to the traditional grade work.

Figure 2 shows the range of distribution and the overlapping of grades. The heavy broken line shows the city median for each grade. This figure merely corroborates the testimony of every statistical study of this kind. Such wide distribution and grade overlapping are common. However, it was a revelation to the

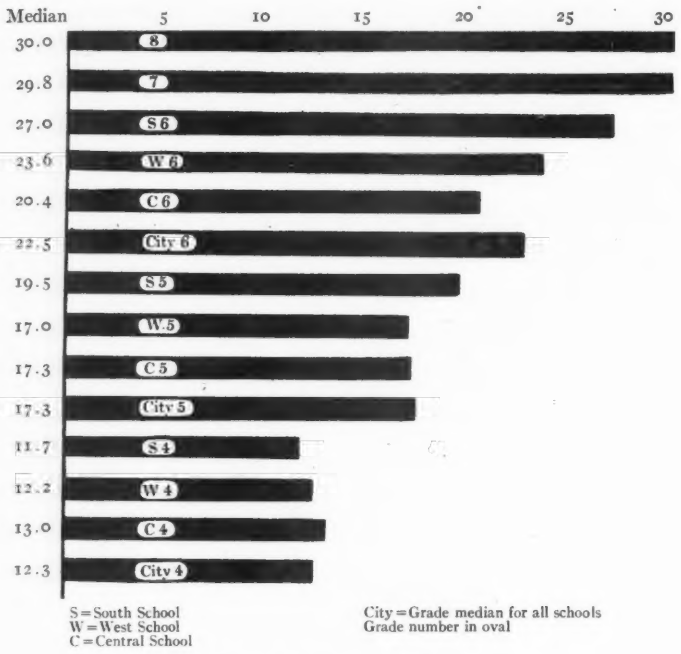


FIG. 1.—Grade medians for each school and for city

teachers of this system, who had not a wide acquaintanceship with statistical investigations. It was the source of many questions and interesting problems for further investigation.

Thus far this study has taken into consideration the data usually regarded as the most significant and valuable. Yet the teachers complained that the questions which were most vital had not been answered. They wished to know why pupils could not work the sixth problem, what difficulty the twelfth problem offered, where

errors in long division occurred, how to narrow the range of distribution, what should be done to correct the overlapping of grades, etc.

In order to answer these questions in part, a study of the types of errors made in working problems was undertaken. Table III shows the number of times each problem was worked incorrectly.

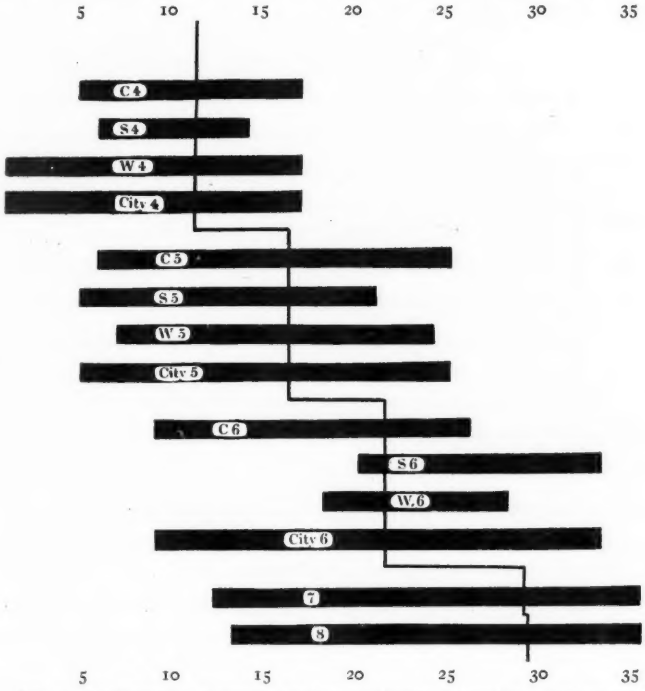


FIG. 2.—Distribution of scores showing overlapping of grades. Broken vertical line shows grade medians.

It is to be read as follows: problem 1 was worked incorrectly by 13 pupils in the fourth grade, 13 pupils in the fifth grade, 3 in the sixth grade, and one each in the seventh and eighth grades, or by 31 pupils in the five upper grades of the system, etc. Such a table is of value in that it shows which problems were the most difficult for the pupils. It is evident at a glance that problems 6, 11, 12, and from 16 on, need investigation.

The sixth problem is $3\overline{)39}$. Some of the answers given are

$9\frac{1}{3}$, 9, $9\frac{3}{3}$, 10, $10\frac{3}{3}$, $10\frac{1}{3}$, $10\frac{2}{3}$, 12, $12\frac{2}{3}$, $12\frac{3}{3}$, $12\frac{1}{3}$

In order to ascertain how these various results were obtained, pupils were given individual oral tests in rooms where no one but pupil and teacher were present. Each pupil was asked to think "aloud," and tell everything he thought and did while solving the problem. It was found that many of the pupils who gave the foregoing answers used the dividend as a unit, ie., found how many times 3 was contained in 39 as a whole instead of saying, first, 3 into 3, then 3 into 9. Those pupils who gave as a result $9\frac{1}{3}$, 9, $9\frac{3}{3}$, did not know the multiplication tables beyond the nines. It was both interesting and instructive to note the mental "twists" which caused errors in individual cases. One pupil gave this result,

$$\begin{array}{r} \text{1 with 6 remainder} \\ \hline 3\overline{)\ 39} \\ \underline{93} \\ 6 \end{array}$$

His mental procedure was, "3 into 3 = 1, 3 × 3 = 9, and 1 × 3 = 3." He placed 93 under 39, subtracting the 3 from the 9, getting 6 remainder. Another pupil had the following result:

$$\begin{array}{r} 93 \\ \hline 3\overline{)\ 39} \end{array}$$

He said, "3 into 3 = 9, then 3 into 9 = 3." This was a case of confusion of the multiplication and the division operation.

Table III shows problem 11 to be a troublesome one also for the fourth and fifth grades. This problem is $2\overline{)13}$. Several pupils gave the following reason for their work:

$$\begin{array}{r} 5-3 \\ \hline 2\overline{)\ 13} \end{array}$$

"Because $5 \times 2 = 10$." Their trouble was ignorance of the multiplication table of sixes. Another pupil gave this solution:

$$\begin{array}{r} 11-1 \\ \hline 2\overline{)\ 13} \end{array}$$

"Because 2 into 2 = 1, and 2 into 3 = 1 with one over." A third pupil gave this solution:

$$2\overline{)\ 13}\quad 6\ 2/1$$

He was having difficulty with the remainder. The same type of difficulty caused the following error:

$$2\overline{)\ 13}\quad 61$$

From Table III, the twelfth problem is seen to be a source of trouble. The problem appears to be a very simple one, "$2 \div 2 =$." That it is not as easy as one might suppose is evidenced by the fact that the author of the scale placed it twelfth in the order of difficulty. It is not in the form in which pupils are accustomed to see such problems. Investigation with individual pupils reveals the following mental operations: $2 \div 2 = 4$ and $2 \div 2 = 2$. In the first case the error is manifestly one of signs, due to the unaccustomed form. In the second case the pupil said $2 \div 2 = 2$, because $2 \times 1 = 2$.

Table III shows that problem 17 was a stumbling-block. In the majority of cases the problem was not attempted because of the form in which it was presented. Fifteen pupils made errors, because of ignorance of the multiplication tables. One pupil said, "7 and what makes 50," showing that he had confused the division and the subtraction signs. Four pupils placed the dividend under the remainder, instead of using the divisor.

Space will not permit the insertion of any more records of short-division errors. A tabulation of the various types of errors made gives the following distribution:

1. Ignorance of multiplication tables—30 per cent. Illustration: $8\overline{)5,856}\quad 8,107$
2. Using dividend as a whole—14 per cent. Illustration: $3\overline{)39}\quad 12-3$
3. Confusion of multiplication and division—14 per cent. Illustration: $3\overline{)\ 39}\quad 93$
4. Remainder—10 per cent. Illustration: $2\overline{)\ 13}\quad 6\ 2/1$
5. Confusion of signs—7 per cent. Illustration: $2 \div 2 = 4$.
6. Form of example strange—5 per cent. Illustration: $\frac{1}{4}$ of 128.

7. Carrying (either forgetting to carry or ignorance of what should be carried)—5 per cent. Illustration: $2\overline{)1{,}350}$ 620

8. Value of 0—5 per cent. Illustration: $9\overline{)0}\,.\,1\overline{)1}$ 9 0

9. Confusion of addition and multiplication—5 per cent. Illustration: $3\overline{)6}$ 3

10. Confusion of dividend and divisor—2 per cent. Illustration: $8\overline{)408}$ 212

(This quotient is explained as follows: 4 into 8=2, 8 into 9=1–1 over, 8 into 18=2–2 over.)

11. Using some figure in dividend twice—2 per cent. Illustration: $8\overline{)5{,}856}$ 7,107

12. Transposing answer—1 per cent. Illustration: $\frac{1}{4}$ of 128=23.

Table III shows that problems involving long division were especially fruitful of errors. A separate study of the errors made in working such problems was made. It was found that the errors were as follows:

1. Trial division—38 per cent.
2. Multiplication—28 per cent.
3. Bringing down numbers—16 per cent.
4. Placing wrong figure in quotient or forgetting to place ciphers in quotient—14 per cent.
5. Subtraction—2 per cent.
6. Guess work—2 per cent.

The following example is typical of the first kind of error enumerated above:

$$\begin{array}{r} 4 \\ 25\overline{)97{,}050} \\ 100 \\ \hline \end{array}$$

In working this problem the pupil said, "25 goes into 97 four times because 2 goes into 9 four times." The multiplication errors need no illustration. The following is an example of errors nos. 3 and 4:

$$\begin{array}{r} 34 \\ 75\overline{)2250300} \\ 225 \\ \hline 300 \\ 300 \end{array}$$

This is the twenty-fourth problem in the Woody Division Scale. The pupil in working it said, "75 goes into 225 three times, because 7 goes into 22 three times. 3 times 75 is 225. There is no remainder. Bring down 3. Seventy-five doesn't go into 3 so bring down both ciphers. 75 goes into 300 four times." This illustrates the failure to bring down the first cipher following 5 in the dividend, also to use 3 and 30 as trial dividends. This failure resulted in the omission of two ciphers in the quotient.

Errors in long division are due then to the following causes:

1. The assumption that the first integer of the divisor may be used always as a trial divisor.
2. The trial-and-error method of finding quotient.
3. Ignorance of multiplication tables.
4. Carrying wrong number when multiplying.
5. Borrowing in subtraction.
6. Ignorance of value of cipher.
7. Forgetting to place integers in quotient.

It is, of course, evident that such an analysis of division errors could have been made without the use of the Woody Division Scale. Nevertheless, this study, in conjunction with the results of the test which gave rise to it, has revealed to the teachers of one school system what must be done if the pupils are to carry away with them the ability to use this tool of knowledge accurately and effectively. They have learned how they may become diagnosticians of mathematical diseases, as well as drillmasters.

A SERIES OF MOTIVATED LANGUAGE LESSONS INTRODUCING DESCRIPTION AS A NEW FORM OF COMPOSITION

ANNA A. CONDON
Assistant Principal, Rogers School, Stamford, Connecticut

The language lessons on description outlined in the following paper were used with a class of grammar-grade pupils of average ability. The aim was to present this difficult form of composition in such a manner that the children would develop greater freedom and individuality of expression in their oral and written English. The basis of all good written work is laid in good oral work.

One day while members of the class were narrating their experiences to one another (in a socialized oral-composition period) one girl suggested that John's composition would be more interesting if he used *description*. She indicated the place. This brought forth a general discussion in which all the pupils agreed with her. The majority of the class felt the need of a new form of composition (description). This was aptly expressed by one pupil, who said, "Our experiences would be more interesting to relate if we *knew how to describe*."

If the teacher can so direct the experiences of his pupils that the problem arises in their own consciousness of need, then it is felt to be theirs and the situation is most favorable for thinking.[1] In other words, the composition work becomes definitely motivated.

LESSON I

METHOD OF PROCEDURE

Teacher:

1. *a*) Are there any interesting places in this vicinity worthy of description?

[1] Dr. L. B. Earhart, *Teaching Children to Study*. New York: Houghton Mifflin Co., 1909, chap. i, "The Nature of Logical Study."

b) Can you recall any scenes which appealed to you during your vacation in the country? at the seashore? (Composition work, if it is to be *vital*, must be made *individual*.)

The class seemed interested in nearby lakes, springs, ponds, waterfalls, etc.

NOTE.—The teacher must now make a careful selection of an appropriate model. "If models are used intelligently in presenting new forms of composition there will be no curbing of individuality of expression on the part of the children."[1]

The following model was selected for this particular group of children:

"The sun gradually wheeled his broad disk down into the west. The wide bosom of the Tappan Zee lay motionless and glassy, excepting here and there a gentle undulation waved and prolonged the blue shadow of the distant mountain. A few amber clouds floated in the sky without a breath to move them. The horizon was of a fine golden tint, changing gradually into a pure apple green, and from that into the deep blue of mid-heaven. A slanting ray lingered on the woody crests and precipices that overhung some parts of the river, giving greater depth to the dark gray and purple of their rocky sides. A sloop was loitering in the distance, dropping slowly down with the tide, her sail hanging uselessly against the mast; and as the reflection of the sky gleamed along the still water, it seemed as if the vessel was suspended in the air."—From *The Legend of Sleepy Hollow*, Washington Irving.

2. Provide each child with a copy of a model, wisely selected to meet the needs of your particular class.

3. Begin the lesson by reading the model to the class.

NOTE.—The teacher's reading will enlist the interest and attention of the whole class in the beginning of the lesson.

4. Then have the children read it silently.

5. Ask them to tell you what they see. When they have a fairly good idea of the *whole picture*, begin the detail study.

6. Have them select the unusually effective expressions and unfamiliar words. These must be made known and stressed.

[1] *The Teaching of English*. By Dr. Paul Klapper. New York: D. Appleton & Co. Chapter vi treats of the value of models in the teaching of composition.

7. Ask them how they would express a similar thought. Make them feel the *need* of a careful choice of words.

8. Have them close their eyes. Read the selection to them again. Ask for the picture.

9. What is the main impression made on your minds when you read the paragraph?

NOTE.—Wait until the majority of the class *feels* the atmosphere of quietude in the picture.

In every motivated lesson a suggestion for further study comes from the children. Let them make their own assignment.

10. Suggestion for a home-study assignment: Select the details in this picture which emphasize the impression of *peace* and *quietude*.

LESSON II

The aim now is to work out the technique of description with the class, viz., in effective description we should find: (*a*) the general *impression;* (*b*) the definite *point of view;* (*c*) a selection of *details* which will produce that impression; (*d*) a careful *location* of those details; (*e*) a wealth of expressive words.

METHOD OF PROCEDURE

Teacher:

1. What picture do you see when you read the model?
2. What impression does Washington Irving wish to produce?
3. Where was he standing?
4. How does he produce that impression of *peace?*
5. Name the various details he selected. Teacher makes a list on the blackboard.

sun	clouds	reflection of sky on water
sea	horizon	slanting ray, etc.

6. Of what did his task consist after he had selected those details? (To locate them effectively.)

7. Let us examine another descriptive paragraph to see if we can find these points.

8. What are the points? (Teacher makes a list on blackboard as child gives them.)

9. Drill
   - (*a*) Impression
   - (*b*) Point of view
   - (*c*) Selection of details
   - (*d*) Effective location of details
   - (*e*) Choice words

10. A number of paragraphs were examined by the class, in the light of these standards.

11. What have we learned thus far about the new form of composition we are considering?

NOTE.—Let children make their own assignment.

12. Suggestion for home-study assignment: Select an interesting description from your home reading and examine it for those points which we have thus far considered in description.

LESSON III

The aim in this lesson is as follows: By means of a simple woodland scene familiar to the class, work out with them the *application* of whatever technique has been acquired thus far.

METHOD OF PROCEDURE

Teacher:

1. "Let us think of a simple woodland scene near the school." After one is selected, ask what must be thought of first.
2. What impression shall we produce?
3. What must we think of next?
4. What is to be our point of view?
5. What is the next step?
6. What details shall we select if we wish to produce an impression of joy? (Make a list of the details given by the class.)

A path through the woods
Trees on each side of the path
Birds; flowers
Brook; moss-covered rocks; ferns
Sky

7. What is the next step? (To locate these in reference to each other.)

NOTE.—Use *drawing* here as a means of expression—a motivated drawing lesson.

8. Ask for a rough sketch of the scene. One pupil to work at the blackboard, others at seats. They will represent a path shaded by overarching trees. They will sketch birds on some of the branches. A little to the left they will represent a brook, bordered by moss-covered rocks. On the banks, they will picture the ferns. Patches of the blue sky will be drawn overhead.

9. How many are able to give that picture in words?

NOTE.—Underscore the locating words when you have written this paragraph on the blackboard:

"Before me stretches a path through the woods, shaded by overarching trees. Flying from branch to branch are the gay little birds. A little to the left runs a small brook, on whose banks grow thick ferns and wild flowers. Overhead is the clear sky."

10. What would make our picture more interesting?

11. What *color* do we find in the scene?

12. What would make our picture even more interesting to the reader or to the listener?

13. What sounds do we hear?

14. Can you think of anything else that would lend interest to the scene? To what other sense could we appeal?

15. What flowers grow there? What words expressing odor could we use?

NOTE.—Put on blackboard the words of color, sound, and fragrance when given by class: green foliage, fragrant violets, blue sky, babbling brook, chirping birds, etc.

16. How many are now able to give me the picture in words? (Let as many as possible recite.)

NOTE.—Let pupils make the assignment.

17. Suggestions for a home assignment: Write the description of a simple woodland scene, introducing color, music, and fragrance.

NOTE.—Do not sacrifice the truth for an effect. The children will feel the need of revisiting the spot, which seemed very familiar to them, until called upon to describe it.

LESSON IV

The aim here is to have the children feel the need of a store of expressive words.

METHOD OF PROCEDURE

Teacher:

1. Have a few of the woodland scenes read to the class. Let pupils offer criticisms.

2. Return to the first model. Pick out the aptly chosen words; the words rich in meaning; the words that helped Irving produce the impression of quietude.

wheeled	blue	slanting
gradually	amber	blue
lay	floated	lingered
motionless	golden	uselessly
gentle	gradually	gleamed

3. Why did Irving use "wheeled," "gradually," etc.?

4. Have them suggest words which they would use. Note the contrast.

NOTE.—Make class feel that hackneyed words would mar good writing.

5. Now re-read the paragraph. How does the picture compare with the one you had in Lesson I?

The children experienced *pure* delight in the final reading of the model.

6. Suggestion for a home assignment: Select from your literature or your outside reading, passages containing happily chosen words. Be able to tell how they helped the writer produce the beautiful picture.

LESSON V

(Arranged for a class which has a working knowledge of grammar)

In this lesson the aim is to have the class feel the *need* of a wise selection of words—especially verbs (for action), adjectives (for color), and adverbs (for effect).

NOTE.—Here is an opportunity for a motivated grammar lesson on verbs, adverbs, and adjectives. The grammar is made vital by a practical application in the composition period.

Teacher:

1. Return to the first model. Pick out the aptly chosen verbs in this selection. (Teacher writes them on the blackboard.)

wheeled	floated	gleamed
lay	lingered	was loitering

2. Tell me why Irving used "wheeled," "lay," etc.

3. Select the words which give color to the paragraph. (Teacher writes them on the blackboard.)

blue	amber	golden, etc.

4. What part of speech is each?

5. What is an important function of adjectives in descriptive work? (Caution: Avoid too many adjectives.)

6. Pick out the words that help bring about a feeling of *peace* and *quietude.*

gradually	motionless	slowly, etc.

7. If this scene were one of life and activity, what adverbs would you use?

8. What is an important function of adverbs in descriptive composition?

9. Now re-read the paragraph. How does the picture compare with the one you had when we began this work?

The children experienced *pure* delight in the final reading of the model.

10. Suggestion for a home assignment: Select from your literature or your outside reading passages containing happily chosen words. Be able to tell how they helped the writer produce the beautiful picture.

NOTE.—Since words give life and color to any description, we must strive to develop in the child the ability to find the right word to express the exact meaning. Just as a skilled painter chooses with care his delicate colors, so also the writer must choose the fitting words.

The class from now on will be interested in finding the happily chosen words in their literature selections and in their home reading. Encourage this all you can. Too often they "skim" over the very beautiful descriptions because they never *felt* the *need* of a store of expressive words. In all this work you are laying a sound basis for enriching the live vocabulary of the children. In other words, your work in this line is definitely motivated.

LESSON VI

The aim is to emphasize the *need* of an enriched vocabulary and to create the *desire* to satisfy that need.

METHOD OF PROCEDURE

Teacher:

1. Begin the lesson by calling for the assigned work. While one child reads his selected paragraph to the class have the pupils fill in some such form as the following:

Sound Words	Words of Color	Words of Odor

2. A definite word-study exercise like the following could be written on the blackboard:

Flow gently, sweet Afton.
The cataract leaps to the ground.
The brook rushes to the sea.

a) Pick out words expressing motion.

b) What kind of motion is expressed by each particular word?

c) Write original sentences. In each use a word of motion in connection with each of the following subjects: ocean, brook, river, clouds.

Special reference for teacher: *Graded Composition Lessons.* Part III, pages 26, 78, 84, 203. By Marcelia McKeon.

The following should be read to the class: Tennyson, "The Brook"; Lanier, "Song of the Chattahoochee"; van Dyke, "Little Rivers" (selection); R. Southey, "The Cataract of Lodore"; Rev. A. J. Ryan, "Song of the River."

LESSON VII

By this time the pupils have a feeling of confidence in their own ability and a spirit of enthusiasm, both of which are very conducive to free self-expression on their part.

METHOD OF PROCEDURE

Teacher:

1. Today we shall begin our original compositions. Select your subjects and plan your compositions according to the principles we have learned thus far in this new work.

NOTE.—Some of the selected subjects were: "The Lake at Hallowe'en Park"; "Klinefelter's Pond"; "The Noroton River"; "The Lake at Laddins' Rock Farm."

The fruit of the foregoing work began to show itself in the spontaneous response and initiative of the class. Some suggested describing the lake in winter, for they wished to produce an impression of desolation. Others wished to paint a summer picture, for the music, color, and fragrance of that season appealed to them, while a third group preferred autumn with its rich coloring. One boy attempted a poem and "thus became our first poet."

The following plan and composition were prepared by one of the pupils:

THE LAKE AT HALLOWE'EN

Impression.—Desolation. Winter scene.

Point of view.—Standing on the rustic bridge which spans the lake.

Details.—Ice-bound lake, wind, trees, lone snow-bird, steamer on the sound, sky.

Words used to bring about a scene of desolation: groan, creak, piping, shrieking, groping, booming.

The composition.[1]—Before me lies the ice-bound lake at Hallowe'en. Held in winter's icy grip it no longer sparkles and dances as it did in summer. The biting wind sweeps up the lake causing the trees along its margin to groan and creak in dismay. A lone snow-bird who has braved the rigors of winter vainly tries to raise his piping voice above the shrieking of the wind. Now and then the weary voice of a steamer answered by the booming voice of a nearby light comes faintly to my ears. The steely gray of the sky, foretelling an approaching storm, makes the already cheerless scene one of desolation.

[1] This composition is reproduced as I received it. The critic informed me that the writer's errors consisted of misspelled words. These were indicated by him and corrected by the owner, before I received the paper.

LESSON VIII

Finish the work which was begun in the preceding lesson. During these periods of written composition, it is very necessary that the teacher move about among the children in a very sympathetic spirit giving individual help and encouragement. The pupils, on the other hand, must feel perfectly free to consult books of synonyms, dictionaries, or question each other or the teacher. The movable furniture now used in most of the modern school buildings allow for the necessary freedom in such a *vital* subject as oral and written composition.

LESSON IX

(Correction of composition by the teacher and by the pupils)

Many teachers feel that correcting compositions is a great burden, and in many cases is time ill spent, since the same errors often reappear in the child's written work. Dr. Franklin T. Baker's suggestions on this point are very valuable: Shall the teacher correct themes? Surely. But he must know how. He must not be fussy nor pitch his standards too high. He must not forget that it is the *ideas*, rather than the form, that are the main thing. He must not forget to put the responsibility for the form on the pupil *as fast as possible* and *make them proofread their themes.*

The aim in this lesson is to develop the habit of self-criticism on the part of *all* the children. In order to realize this aim, however, the compositions must be short.

METHOD OF PROCEDURE

a) *Criticism by teacher.*—During the period of written composition the teacher is of great service to her class, for as she walks about among them she has a splendid opportunity, not only to help those who need encouragement and individual attention, but also to correct errors without curbing free expression. The child, of course, must know the *cause* of his error, otherwise he will never become self-critical—a habit which the teacher of composition should endeavor to help her pupils to acquire.

Select those children who are below the standard of the grade in this work and in the conference period, make known to them their weaknesses, and aid them to acquire skill in this most useful art.

NOTE.—When the teacher has read the set of papers (not necessarily corrected, nor marked them) she notes the typical errors or general weaknesses of her class. She makes this work the basis of her next instruction.

References for teachers: *Standards in English*, J. J. Mahoney; *Lawrence Course of Study in English*, Sheridan; *New Jersey Course of Study in English*, Kendall.

b) *Criticism by pupils* (another period).—In the first place, make children understand that *correcting* or *criticizing* means helping, *not* marking.

When the class has finished writing (and before or after the teacher has read the compositions), the children exchange papers for intelligent and constructive criticism. The socialized oral-composition period helps the pupils to acquire a habit of intelligent criticism and appreciation of the work of their fellow-pupils. They now apply these standards of judgment to the written work of their classmates. The pupils who have linguistic ability criticize the work of those who are below grade, while the latter read with inspiration and delight the papers of the former.

The papers are then returned to their owners, who proceed to follow the suggestions and correct the errors indicated by their critics. Often they confer with one another. Such a method of criticism effectively improves the written expression of children. It is infinitely superior to the weary drudgery of "red ink" correction made by the teacher and blindly followed by the pupils.

The following are a few of the best compositions from this group of children:

THE LAKE AT HALLOWE'EN PARK[1]

From the summit of the sunny hillside, on which I stand, I can see the lake at Hallowe'en, whose blue waters sparkle as they shimmer in the sunlight. Here and there I see tiny islands on which grow stately elms. The lake is bordered by thick low bushes. Farther on, to the right, are the tender trees that have been nipped by the frost into brilliant dyes of orange, purple and scarlet. Some of the little birds who have not yet departed for the warm

[1] This composition is reproduced as I received it. The critic informed me that an exclamation point at the end of the last sentence was suggested by him.

regions of the South are fluttering from one limb to another. Overhead a few fleecy clouds float through the clear blue serene sky. What a delight it is to gaze at this scene in the beautiful autumn!

A Winter Scene[1]

All is calm and silent,
The old elms are unclad.
Hushed, are the songs of the birds,
Gone, are the flowers we had!

The water is dark and cold
Where once it danced with delight!
And the quaint rustic bridge looks gloomy and old,
As if dreading the bleak winter night.

The banks are now bare and brown,
Faded and gone are their fragrant things.
The ice-covered ponds we pass in our walk,
Reveal Jack Frost's work with the springs.

There remain the same gray rocks.
But, where is the velvet moss?
The sky is o'ercast and weary,
And the beauties of summer are lost.

Then let us be happy when summer is here,
And enjoy what the Great God has made.
Complain not my children, this time of the year,
And you will be sure of His aid!

The Lake at Laddins' Rock Farm[2]

Before me sparkles a beautiful lake. The golden rays of the sun, streaming through the swaying boughs of the willows and beeches, nestle peacefully on its bosom. The shining white pebbles, lying in its bottom, furnish seats for the tiny dwellers there. The shy goldfish, darting swiftly through the water, seem to fear the stately bullfrogs that leap from rock to rock. Here the birds find friends and homes. The chirping robins, the twittering sparrows among'st the others, make this spot human with their merry notes of gossip.

As I sit in one of the garden seats and gaze on this scene of beauty and listen to the united chorus of my wood friends, it almost induces me to join in their melodies. How could anyone sit here and be unhappy! The gentle summer breezes whisper that flowers are blooming near by. As with a happy

[1] This was the pupil's first attempt at verse making. No change whatever was made in the poem.

[2] Written by a former pupil, who visited this spot during the month of June. At the time we were studying "The Vision of Sir Launfal."

and contented heart, I pluck their upturned faces, I am reminded of the "Great Seven Days' Work," wrought by the Almighty from whom comes the beauty of all things!

The Lagoon at Seaside Park[1]

Before me, covered with sparkling snow and ice is the lagoon at Seaside Park. The moon gleams down upon the joyful skaters whose shouts ring out through the crisp air. Some distance to my left, I catch the faint outline of a hill, broken here and there by sturdy trees. To my right is a snug cottage from whose windows a ruddy light gleams. The sight makes me think of my own cozy kitchen with its blazing fire. Far in the distance I see long lines of dim street lights. The clanging of a bell tells me that a boat is pulling up to the dock.

The Lake at Hallowe'en Park[2]

Standing on the rustic bridge which spans the lake, I see directly in front of me, the rippling water in which little goldfishes are swimming to their hearts' content. Bordering the lake are low bushes where twittering birds are perched. Now and then the screech of a distant sea gull can be heard as he darts quickly at his prey. Here and there along the banks are moss-covered rocks which seem to have been put there to serve as resting places for the burly bull-frogs. A few small islands with their slender but stately elms dot the lake. To my right is a grassy knoll with a few benches, where visitors may rest and enjoy the refreshing breezes from the Sound.

The Lake at Hallowe'en[3]

I am standing on the bridge which is at one end of the lake. I see the frozen water of the lake. Here the jolly folks are skating to and fro. Often a beginner tumbles down. In the middle of this lake are two islands and on each grow elm trees. Around the edge of the lake are bushes. In the distance, as far as the eye can reach, can be seen the sandy hills of Long Island.

[1] Criticized by the teacher. This pupil had selected interesting details, had a store of aptly chosen words, but he was weak in sentence variety. Had a conference with him, in which we talked this matter over together. He made another attempt, focusing his attention this time on sentence betterment.

[2] His critic informed me that he suggested the combining of two short sentences to form the last sentence.

[3] The last composition submitted is typical of the poorest work done in the grade. Considerable attention is given him during the periods of written composition, for he needs sympathy and encouragement. He has ideas, but he expresses them with great difficulty.

STANDARD TESTS AND A BASAL METHOD OF TEACHING READING

D. C. BLISS
Superintendent of Schools, Montclair, New Jersey

Must the school superintendent depend upon his unsupported opinion of the relative value of different methods of teaching reading, or can he determine beyond a reasonable doubt which one produces the best results?

This investigation represents an attempt to answer this vexed question on a more authoritative basis than the statements of enthusiastic book agents or of a superficial study of the different systems produced by publishers. The assumption is made that a reading system may be selected because of the efficiency of the results obtained, and that the logical place to test these results is in the third grade. By the time this grade has been reached the child is old enough to make testing possible, and after three years' use any method should reveal its value. In the later grades method is of diminishing importance, and other factors may operate to influence the results.

In making the investigation two schools in the same city were selected, in each of which a different basal method was employed. The social status of the children was practically identical, and the teachers in the two schools were believed to be of practically equal teaching ability. All tests were conducted by one examiner, who also rated the papers. Seven tests were selected, designed to test the reading ability of the children from every angle. Some of these could be given to the entire group, while others were given to the pupils individually. The tests were made upon reading-matter unfamiliar to all of the children.

The specific elements investigated were: rate of oral reading, rate of silent reading, vocabulary, and comprehension.

Directions given to the examiner were as follows:

TEST I. RATE OF ORAL READING

Choose a selection from a reading-book which has not been used by any group and is suited to the capacity of the grade. Give the pupils individually a three-minute test. Reckon rate by lines. Count a fraction of a line more than one-half a full line. Ignore less than half a line. Allow the child to read without comment. Note time when he begins and the point which he has reached at the close of the three-minute period. Permit the child to finish the paragraph.

The selection made was "Five Out of One Shell," Hans Andersen, William's *Choice Literature*, Book I.

TEST II. RATE OF SILENT READING, QUANTITY ELEMENT

Follow the same method as in Test I, using a different selection. To determine the exact time of beginning the examiner may read to the child a part of the preceding page and stop at the bottom. The child then turns the page and begins his silent reading. Tell the child he is to be questioned on what he has read. At the close of the three-minute period have the child close his book and indicate the substance of the last line read. This will prevent any tendency to exaggerate the amount. If necessary repeat the test and take the average.

The selection chosen was "The Daisy," Hans Andersen, William's *Choice Literature*, Book I.

TEST III. SILENT READING, TIME ELEMENT

Make a selection from an unfamiliar reader requiring approximately three minutes. This is determined by preliminary tests with average children. Indicate to the child the place on the page where he is to begin, and note the time. The exact time of completion is denoted by the turning of the page.

The selection used was, "Piccola," *The Richmond Second Reader*.

TEST IV. ENGLISH VOCABULARY, CLASS EXERCISE

Thorndike Visual Vocabulary Test according to directions.

TEST V. COMPREHENSION OF SELECTION READ TO THE CLASS

Read to the pupils a selection which includes ten specific ideas. Children then reproduce in writing. Score by counting the number of ideas reproduced.

The following paragraph was used:

THE NEEDLE

Hans Andersen

There was once a needle who thought herself so fine as to be fit only for embroidery.

"See, I am coming with a train," said the needle, drawing a long thread after her; but there was no knot in the thread.

Fingers placed the point of the needle against the cook's slipper. There was a crack in the leather which had to be sewed together.

"What coarse work!" said the needle. "I shall never get through. I shall break!—I am breaking!" and sure enough she broke. "Did I not say so?" said the needle. "I know I am too fine for such work as that."

"This needle is quite useless for sewing now," said the fingers; but the cook dropped some sealing wax on the needle, and used it to fasten her collar.

"Now I am a breast pin," said the needle.

TEST VI. COMPREHENSION OF SELECTION READ SILENTLY

Allow children five minutes to read a selection containing ten specific ideas. Immediately thereafter have them reproduce in writing what they have read. Score by counting the ideas reproduced.

The paragraph used was as follows:

THE FIR TREE

Hans Andersen

Out in the forest was a pretty little fir tree. It stood where it could have the sunlight, and where there was plenty of air. It had many larger companions, pines as well as firs. The little fir tree was not happy. It wanted to become larger. It did not care for the warm sun and fresh air; it took no notice of the children who had come out to look for berries. But the children noticed it, and when they had a whole basket of berries, or had strung berries on a straw, they would sit down by the little fir tree and say, "How pretty and how small this one is!"

TEST VII. SILENT READING

Kelly Reading Test according to directions.

The results obtained from these tests appear in Table I. In School I, using the X method, the A and B sections were together in a single class. In School II, using the Y method, the two sections were in different rooms and the results were given separately. The median attainment is the one used. The division

into A and B groups is made on the basis of general capacity, the A being the more advanced.

According to Table I the median attainment in silent reading of the A and B sections in School I was 10 lines per minute. The A

TABLE I

SEVEN READING TESTS, GRADE III, 1917

	NUMBER OF TEST						
	I	II	III	IV	V	VI	VII
			Min. Sec.				
School I, A and B sections, method X	10	13.5	2 38	5.10	4.9	6	10.7
School II, A section, method Y	9	11.7	3 29	3.92	4.5	5	4.2
School II, B section, method Y	9	11.0	3 37	2.63	3.6	4	2.5

section in School II gave a median rate of 9 lines per minute, and the B section reached the same standard. In Test II the mixed group in School I read at the rate of 13.5 lines per minute, surpassing the A group in School II by 1.8 lines. Test III is based upon the time element. The median time required by the mixed group of School I to read the assigned selection was 2 minutes and 38 seconds; the A section in School II needed 3 minutes and 29 seconds to read the same amount, and the B section required 3 minutes and 37 seconds. In no instance does the mixed group of School I fail to surpass the achievement of the A group of School II. Test I is the only record where the B group of School II reaches the same standard as the A section. Assuming that the grading in the school is in accordance with the abilities of the children, this fact alone furnishes evidence that the basal method of reading employed in the schools is the real cause for the uniformly higher record made by School I.

The suggestion was made that these results might be due to a class of exceptional ability in School I for this single year. Teachers are well aware that such classes are occasionally found. Accordingly the records were filed and nothing was said of the results obtained. In 1918 the testing was resumed along the same general lines, with a third school in a different section of the city included in the scope of the test. This school employs the same

system of reading as is used in School I. The enrolment had so changed that two distinct sections A and B appeared in each school. Granting that School I had possessed a class of exceptional ability in 1917, it was highly improbable that the same condition would be reproduced the following year, and in any event the inclusion of a third school removed any doubts of this character. As has been indicated, Schools I and III followed the same basal method in teaching reading, while School II used a different one.

In view of the extreme difficulty and amount of time consumed in giving tests requiring examination of individual children, the tests in 1918 are restricted to those which could be given in groups.

In Table II schools are designated by the same numbers as

TABLE II

FOUR READING TESTS, GRADE III, 1918

	NUMBER OF TEST			
	IV	V	VI	VII
School I, A section	36.5	6.2	6.9	7.10
Method X, B section	21.0	4.8	4.5	2.60
School II, A section	21.5	4.6	6.0	5.40
Method Y, B section	9.5	3.0	3.7	1.20
School III, A section	34.0	4.0	5.8	10.13
Method X, B section	9.0	3.8	3.6	2.60

were employed in 1917, and the test numbers correspond with those given in the previous table. Here again appear the same general conditions found in 1917. The B section in each school is uniformly less efficient than the A section, which indicates that the ratings are not due to accident, but are produced by a real difference in the reading ability of the pupils. School II, with only four exceptions, makes a lower record than the corresponding section of the other two schools, using the same system of reading.

A comparison of School I and School II, where similar types of children are in attendance, shows, with no exception, a superior record for the X method of reading as a basal system.

The collected statistics furnish a basis for investigating the extent to which the reading method produces deviation within the respective groups. There is no apparent reason for believing that the method employed would influence variability. On the contrary, it is a natural assumption that this factor would be determined wholly by the character of the class; that a group of varying capacity in the beginning would show at the time of testing the same lack of uniform attainment, whatever method had been employed.

Although there are some exceptions, the table of variabilities seems to justify this assumption. The condition suggested is decidedly apparent in Tests II and VII, 1917, where the combined groups in School I have a greater average deviation than either of the sections in School II, but is reversed for Tests I and IV. This absence of a uniform tendency indicates that the element of variability may be disregarded altogether.

The table suggests a much better grading for the different sections in 1918 than was found in 1917. Nothing is disclosed by

TABLE III

AVERAGE DEVIATIONS, 1917

	NUMBER OF TEST						
	I	II	III	IV	V	VI	VII
			Min. Sec.				
School I, A and B sections, method X	2.3	5.1	33 5	1.2	1.5	1.9	3.3
School II, A section, method Y	2.4	2.9	24 0	2.3	1.2	1.6	2.3
School II, B section method Y	3.5	3.6	34 0	2.6	1.9	1.9	1.8

AVERAGE DEVIATIONS, 1918

	NUMBER OF TEST				NUMBER OF TEST		
	V	VI	VII		V	VI	VII
School I, A section, method X	1.1	1.1	3.2	School II, B section, method Y	1.7	1.9	1.8
School I, B section, method X	1.4	1.5	2.6	School II, A section, method X	1.1	1.5	2.2
School II, A section, method Y	1.5	1.5	3.4	School III, B section, method X	1.5	1.9	1.8

the variability table that seems to disprove the indication apparent in the ratings obtained by the respective sections.

While the scope of these tests is too limited and the number of pupils involved too few to warrant an authoritative statement that one of the two systems of reading is more efficient than the other, the general tendency of the results is unmistakable. If the tests were given in other school systems, or repeated several times in a single system with a resulting similar tendency, any element of doubt would be finally removed. They certainly imply that it is possible for the school superintendent to make a selection of a basal system of reading on a more authoritative basis than mere opinion.

THE RESULTS OF SOME CLASSROOM MEASUREMENTS

CARL COTTON
Portsmouth, New Hampshire

The purpose of this article is to set forth briefly the results of certain tests of the fundamental subjects of the elementary-school curriculum when applied to a school system. The work of the various grades, from the fourth to the eighth inclusive, was measured in the four fundamentals of arithmetic, spelling, writing, and composition and reading during last November and December and again in the spring. The primary object was to obtain a quick judgment on the merits of the general work of the schoolroom, to test the efficiency of the pupils and teachers, and thus to secure an adequate basis for supervision.

The following scales were used in testing the work of sixteen schools, suburban and rural: Woody's Arithmetic Scales, Teachers College Contribution to Education No. 80; Ayers's Spelling and Writing Scales, Russell Sage Foundation; Hillegas Composition Scale, Teachers College Publication, 1913, and *Teachers College Record*, January, 1917; Brown's Reading Measurements, Bureau of Research, Concord, New Hampshire.

In Woody's tests the problems are graded beginning with a very easy problem, such as may be readily performed by a first-grade pupil and increasing in variety and difficulty to the last one, which is so difficult that only a small percentage of the pupils of the eighth grade are able to solve it correctly.

The results from this series of tests in the various grades are presented in Figs. 1 to 4. The broken lines in the figure indicate Woody's Standard Median, while the unbroken line shows the results of the tests under discussion. No spring tests in this same series were given owing to the fact that the standard medians were derived from tests given in November and December.

The conclusion drawn from the comparison of scores is that the method of teaching is quite consistent in the fundamental processes

of arithmetic, although not quite so efficient in drill as the teaching in the set of schools tested by Woody. Special weakness was shown in addition. More drill was called for in this subject. It was observed that the medians came very close together in division. This disclosed the fact that our supervision secured better process work than drill. Emphasis upon the process work doubtless

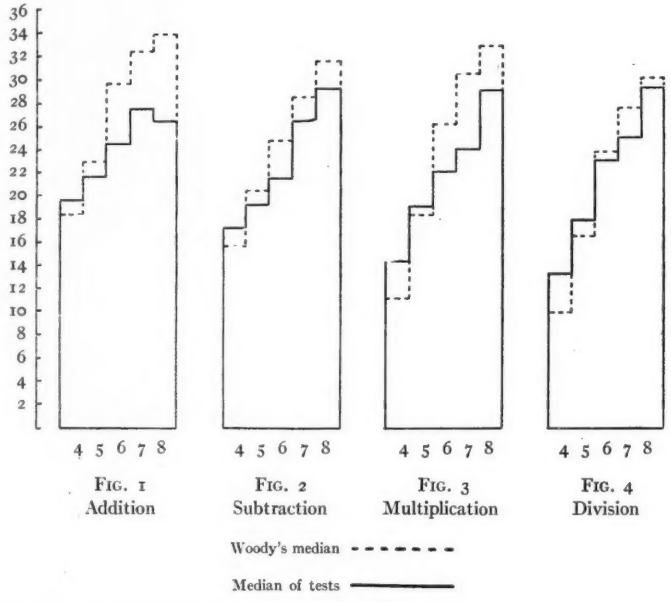


FIG. 1 Addition

FIG. 2 Subtraction

FIG. 3 Multiplication

FIG. 4 Division

tended to strengthen the reasoning processes that are involved in division.

These tests also disclosed certain errors typical of classes and suggested matters to be emphasized in instruction. When a large number of the class failed to invert the divisor in the division of fractions, or when a large number failed to locate the decimal point properly in the performance of problems involving the use of decimals, the teacher should have known immediately that the class needed more practice in the particular processes. Other types of problems in which a class or certain individuals were found to be

weak, such as adding figures crosswise of the page, were located with the result that the class was afterward directed more intelligently in its work. It was evident that the supervision and teaching in this branch had been well done for a number of years.

In the graph in reading, Fig. 5, the broken line indicates Brown's Highest Grade Averages, the unbroken line shows the tests given in the month of December, and the portion of the figure hatched-in shows the results of the spring tests. In this graph the medians of the upper fifth of the class (quintile) are compared with Brown's Highest Grade Averages. Since Brown's tentative standards were derived from the highest attainment found in a reasonable sized grade of normal pupils under normal conditions at the end of a year, and as there is a large amount of variation between the scores of different classes in the same grade the writer found that the median of the upper quintile afforded a fair basis for comparison. The correlation is so good that both class and individual weaknesses may be readily located.

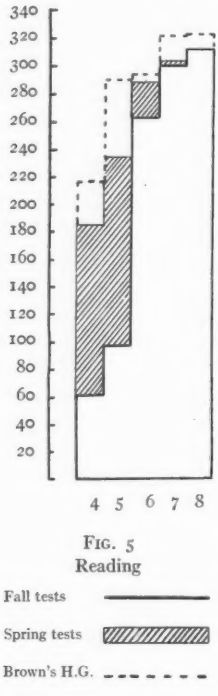


FIG. 5
Reading

A comparison of the medians of the tests in December and May disclosed inefficiency in the teaching of this subject. A tendency was shown for the reading to break down in the fifth grade, owing without doubt to too many changes in the style of teaching reading. There was too much reading aloud for content and too much overemphasis upon improper phonic drill. As a result, more individual attention was given to cases which may be readily analyzed from a study of the rate of reading, the reproduction, and the comprehension scores. Physical and psychological defects in the individual were the subject of analysis. Reading solely as a class exercise was abandoned. Individuals now read to the class, and small groups are dealt with by the teacher. Statisti-

cal results have disclosed to the teachers the necessity for such changes. Since such methods of teaching have been the subject of scientific inquiry, the teachers have felt the need of instruction in the treatment of this subject. It was apparent from the improvement in the spring scores when compared with the fall scores that much was accomplished by the teaching force.

In Fig. 6 the unbroken line and the portion of the figure hatched indicate the medians of the fall and spring tests respectively. The broken line designates the tentative standard medians of the Hillegas Scale. The tentative standard medians show the quality of composition to be expected from at least half of a normal class of American boys and girls at the end of any given year.

The autumn tests disclosed the fact that the teachers hardly knew what to expect or require. No standards had been used as a basis of rating pupils. No models of what an adequate composition for a pupil of a certain grade should be were to be found previous to the standards set up in January of 1917.

In scoring the results the judgment of the teacher was developed in the use of the scale. The supervisor's judgment as a final check upon the rating given to the composition was regarded as sufficiently accurate. The results of the second series of tests showed much improvement over the first series given. The improvement is commensurate for nearly all grades. The high median score of the fourth grade was made possible by a good teacher in English composition. The low median in the seventh grade was the result of inattention

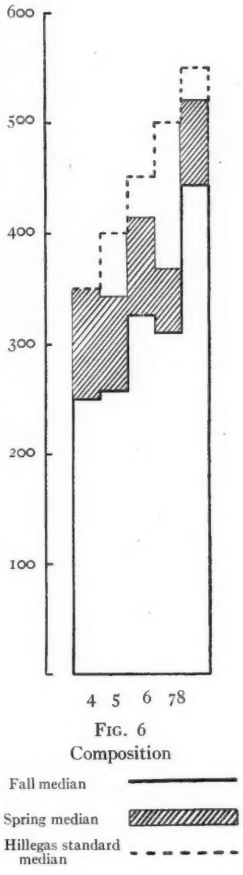


FIG. 6

to the teaching of English composition on the part of an excellent teacher of English grammar. It was found that subnormal and supernormal children may be easily detected by the use of the scale. In order to comply with the demand on the part of the teachers for more explicit instructions in the teaching of composition, it was evident that the processes involved in the development of the subject must be tabulated and studied more fully.

The tests in spelling and writing were treated in like manner. All of the pupils of a class in spelling who scored 95 per cent or above were excused from further spelling lessons for a time, and the lesson was given over to the lower portion of the class. In writing, all of those who sustained an average above sixty on the Ayers's Scale were excused from special attention, leaving the hand to develop naturally. The teachers were required to watch for deterioration and allow no slovenly work in any subject to be passed (see New Hampshire State Course).

The general results of the tests have been to secure an accurate rating of the individual pupil that is reliable for grading properly and to stimulate a more careful, painstaking, and effective instruction in the various branches on the part of the teaching force. Diligent search has been made for the best educational literature, careful attention has been given to state and national developments, and in some cases special training has been sought. There is no further question as to whether definite standards of achievement are possible. They are located, and it is the purpose of the supervisory and teaching force to attain these standards of instruction or to know the reason why such results are not achieved.

EDUCATIONAL WRITINGS

I. COMMENT ON CURRENT EDUCATIONAL WRITINGS

1. *A new study of social education.*—A new volume[1] has appeared which is an illuminating contribution to a field of educational discussion that is greatly in need of increased cultivation, namely, that of educational sociology. The writer presents a broad survey of the place and function of education in social life from the beginnings of history down to the present time and of the interaction of school and society upon each other.

The volume is exceedingly comprehensive in the range of topics treated. There is almost no important function of education that is not given some share in the treatment. The first chapter presents an epitome of the history of education in its fundamental social aspects. The second presents a list of social ideals and attitudes toward life that should in large measure constitute the objectives of education on its social side. The author here discusses the values for society and for education of sociability, co-operation, tolerance, freedom, responsibility, sense of duty, initiative, and justice. There is then a discussion of the social conditions which control the school: influence of the home, the church, philanthropic society, business and industrial organization, the political state, tradition and custom, public opinion, competing social classes, and different social ideals. Following this is discussion of the effect of the school upon society: in transmitting culture, in advancing learning, in socializing individuals, in fixing or obliterating class lines, in assimilating the immigrants, and in social reforms. The school is then discussed as a health-protecting agency, and attention is given to physical training, health instruction, open-air schools, provision for feeding school children, medical inspection, school buildings and sanitation.

The school is considered further as a selective agency, as observed in the phenomena of retardation, elimination, and acceleration; also as a guiding institution, as revealed in the movement for vocational guidance; as a civic and recreational training institution, as revealed in the community center. Attention is given to moral education in its many historical, political, social, and other aspects. A section is devoted to the social aspects of general organization and management of schools and school systems by city and state and nation, and of special types of organization, such as the junior high school and the Gary plan. Consideration is given to the social relationships, functions,

[1] *The School as a Social Institution: An Introduction to the Study of Social Education.* By Charles L. Robbins. New York: Allyn & Bacon, 1918. Pp. xxv+470.

and problems involved in private schools. Attention is given to the social aspect of all of the major subjects in the curriculum; a long chapter is devoted to educational methods; and the volume is concluded with a full discussion of the teacher along lines similar to the treatment of this topic in books on public-school administration.

It is clear that the writer has investigated every important aspect of education and has here epitomized in compact and highly systematized form the results of his investigations. A carefully selected bibliography is presented in connection with each of the fifteen chapters and a general bibliography at the end of the volume.

J. F. BOBBITT

2. *Some books of interest to teachers of history in the elementary school.*— There are but few books on the teaching of history in the elementary school which are of direct and practical help to the teachers in the grades. There has recently appeared, however, a little book which is an exception to the general rule. This is a book[1] by Superintendent Kendall and Miss Stryker of New Jersey. It is one of the recent issues of the Riverside Educational Monographs. In the opening chapter the authors discuss the value of history in the elementary school, centering their discussion around the following values: (1) History explains the present; (2) History stimulates intelligent patriotism; (3) History develops the reasoning power and the balanced judgment; (4) History stimulates the imagination and interests the child in historical reading; (5) History is a guide to conduct. This opening discussion is followed by chapters on the history story in the primary grades, the biographical story in the intermediate grades, the use of the history textbook, the assignment of the lesson, the study recitation, the use of the outline, the use of outside reading, the recitation, the use of illustrative material, dramatization, debates, relation of history to geography, concerning English, and concerning holidays. These fifteen chapters of necessity receive but brief consideration since the volume totals but 130 pages of actual discussion. It should be said, however, that the discussions, though brief, are concrete and stimulating. Devices are suggested and many reforms are proposed. While there is nothing really new in the book, it is an excellent presentation of what many good teachers of history already know and are doing.

Baltimore County, Maryland, has recently done very much to advance the cause of the teaching of history in all of the grades of the elementary school. The most recent work is by two teachers in this county.[2] It is made up of complete lesson plans in fourth-grade history. The material presented,

[1] *History in the Elementary School.* By Calvin Noyes Kendall and Florence Elizabeth Stryker. Chicago: Houghton Mifflin Co., 1918. Pp. 134.

[2] *Lesson Plans in Fourth Grade History.* By M. Annie Grace, Emma C. Monroe, and others. Baltimore: Warwick & York, Inc., 1917. Pp. 155. $0.75.

although originally designed for use in teaching American history in the fourth grade of Baltimore County public schools, may easily be adapted for use in the higher grades. The text is divided into sections, each section representing some phase of colonization in America or the development of the country up to the eve of the Revolution. Each phase is subdivided into lessons, so that a series of comprehensive lesson plans is presented for use from day to day by the teacher who is taking up with her class some particular aspect of American history. The material composing the volume was first carefully worked out by the public-school teachers in most instances; it was then printed in the *Atlantic Educational Journal* and in its printed form employed in classroom work; and it now appears revised in accordance with the changes and improvements suggested by this thorough testing. The volume is broadly divided into seven primary divisions, namely: "Legendary History," "Stumbling upon a Continent," "Search for an Eastern Trade Route," "Search for a Western Trade Route," "Explorations," "Colonization," and "The French and Indian War." These divisions are subdivided so that a series of plans is given on each of the following subjects: Trojan War, Ulysses, Vikings, Marco Polo, Prince Henry, Vasco da Gama, Christopher Columbus, Amerigo Vespucci, John Cabot, Ferdinand Magellan, Vasco Nunez Balboa, Cabeza de Vaca, Hernando de Soto, Sir Francis Drake, Giovanni da Verrazano, Jacques Cartier, Jean Ribaut, Laudonierre, Samuel de Champlain, Joliet and Marquette, Robert Cavalier de la Salle, the French at Port Royal, the Spanish at St. Augustine, the English at Roanoke, Jamestown, Plymouth, St. Mary's and Philadelphia, the Dutch at Amsterdam, and the French and Indian War. Through the publication of the text in this form a great mass of invaluable material is made easily accessible to the teacher. Throughout the book the method of attack or procedure is kept constantly in mind. Moreover, a series of outlines on each subject has been constructed and is presented in such form as to prove exceedingly helpful to the teacher.

The Macmillan Company has recently begun the publication of a series of books under the general title "World Famous Stories in Historic Settings."

Four of these volumes have recently come to the office of the *Elementary School Journal*.[1] The books are intended for supplementary readers in the grammar school in connection with history and literature. The first volume is made up of stories concerning Egypt and her neighbors. These stories center around such titles as "The Gift of the Nile," "Beliefs and Customs of the Egyptians," "Egyptian Writing," "Egyptian Religion and Literature," "Egyptian Cities and Egyptian Art," "The Chosen People," "Joseph, the Moon of Canaan," "Moses the Deliverer," "Legends of David and Solomon," "The Palm Land and Her People," and "The Story of Cadmus and Europe."

[1] "World Famous Stories in Historic Settings." Vol. I, *Egypt and Her Neighbors;* Vol. II, *Glorious Greece and Imperial Rome;* Vol. III, *Western Europe;* Vol. IV, *Merry England*. By Susie M. Best. Chicago: Macmillan, 1918. $0.60 each.

The stories are clothed in simple language and are full of the story-telling spirit. They will be of much interest and help to girls and boys from twelve to fifteen years of age.

Volumes II, III, and IV contain stories relating to Greece and Rome, the nations of Western Europe, and Merry England. Volume III centers around the following topics: "The Children of the Woods," "Wonder Tales of Odi, the All-Father," "Wonder Tales of Thor, the Thunderer," "Wonder Tales of the Fenris Wolf," "Wonder Tales of Balder, the Beautiful," "Wonder Tales of the Twilight of the Gods," "Roman and Teuton," "Saracen and Teuton," "The Story of Charlemagne," "Count Roland at Roncevalles," "Ogier the Dane," "The Growth of Feudalism," and "The Growth of Monasticism." The volume on Merry England contains twelve stories, the first concerning the Arthurian romances and the last the birth of liberty. All of these stories are written in the same interesting fashion that characterizes those in Volume I. They have all been written by a practical story-teller and have been used over and over again in actual school work.

Each book is illustrated with pen sketches of the scenes depicted in the stories. While these pictures are not historically accurate they will assist the young reader in formulating a concrete picture for the background of history. A few maps are found here and there throughout the series.

Many cities in the country are offering a course in local history in some grade of the elementary school. The problem of securing suitable material for this course has always been a difficult one to solve. Cincinnati, New Orleans, and Newark have published material relating to local history for the use of both teachers and pupils. The work of these cities has stimulated other localities to do likewise. Two recent examples have come to the office of the *Journal*.[1]

Real Stories from Baltimore County History contain data obtained by the teachers and children of the schools of this county. The volume is made up of stories written by the children themselves with additional ones prepared by the teachers. While the book is of exceptional value locally, it should also do much to stimulate other communities to prepare material of a similar nature.

Bay County—Past and Present[2] is another example of the preparation of local history material by pupils and teachers. In this case the work was done by the sixth-grade geography classes of the Bay City, Michigan, public schools. It contains sections relative to Bay County and surrounding counties on the following general topics: "Native Life," "White People Take Possession," "Settlement," "Industrial Development," "People," and "Government." Throughout the work are scattered maps and illustrations, many of which por-

[1] *Real Stories from Baltimore County History*. By Isabel Davidson. Baltimore: Warwick & York, Inc., 1917. Pp. 282.

[2] *Bay County—Past and Present*. Edited by George E. Butterfield. Bay City, Mich.: C. and J. Gregory, 1918. Pp. 212.

tray present-day life in Bay County. On the whole the work is very excellently done and should be a source of pride to the teachers and pupils of the sixth-grade geography classes in Bay City.

R. M. TRYON

---

3. *An investigation in mathematics teaching in secondary schools.*—This monograph[1] is easily the largest, most important, and most significant contribution to the teaching of high-school mathematics that has come to the writer's attention. We have been flooded of late with a large number of articles, pamphlets, and even entire books supporting one viewpoint or another with respect to the place and the teaching of mathematics in the high school. Witness the large amount of space given recently in our magazines to discussions pro and con with reference to the theory of the "transfer of training." In some cases our mathematics clubs and conference meetings have been mere love feasts where teachers meet and adjourn without coming to any definite conclusions except perhaps that "the other fellow is all wrong in his opinions."

What we need today more than ever before is what the authors of this monograph have set out to furnish, namely, "quantitative evidence concerning what we do." Someone has said that the results of no statistical investigation are any more reliable than the facts with which they start. Rugg and Clark have furnished a great many facts to support the conclusions set forth in their monograph, and it deserves the careful study and criticism of every progressive teacher of mathematics in the high school.

Chapter i ("Ninth-Grade Mathematics on Trial") is a sweeping charge against the present status of ninth-grade mathematics both with respect to the content and method of teaching. They criticize severely the organization of current textbooks and furnish plenty of argument and facts to show that the textbooks have paid little attention to the "learning" of ninth-grade students or to the subsequent value of the content.

Three ways are suggested by means of which the effectiveness of our present scheme of mathematical teaching may be evaluated. First we may consider "the general criticism that has come from the lay public outside of school and from our more intelligent critics within the school. Secondly, we may weigh critically the results obtained by a study of failures in secondary mathematics. Thirdly, we can judge the efficiency of our work by a careful consideration of the results of measuring, by means of standardized tests, and by achievements of children who have been educated under the present scheme. The authors use each of these three methods to support their findings. They

[1] "Scientific Method in the Reconstruction of Ninth-Grade Mathematics," *Supplementary Educational Monographs*, Vol. II, No. 1, Whole No. 7. By Harold Ordway Rugg and John Roscoe Clark. Chicago: University of Chicago Press. Pp. 189. $1.00 net; postage extra; weight 1 lb.

furnish scientific evidence to support the stand that the large percentage of failures in ninth-grade mathematics cannot be justified. This, in the opinion of the writer, is one of the most important points in the monograph.

There is no doubt that more students fail in their mathematics in the ninth grade than we have realized, and we cannot continue our present method without meriting the deserved condemnation of all intelligent students of education. The authors have formulated tests and practice exercises to help them determine their findings, and as a result of the application of the three methods mentioned above the authors claim that there is a "decided inefficiency in both the routine and reasoning processes of mental work."

The monograph charges the teachers with following the textbooks more or less blindly, and in this their point is no doubt well taken. It is also pointed out that a large percentage of our textbooks and courses of study in the high school have been made by college men more or less unacquainted with the methods of teaching and the psychology of the learner. These college men have therefore dominated our field and have dictated our practices. It is high time that the high-school teachers assume the responsibilities of teaching their children intelligently. The authors in 1915 laid down a program involving:

1. A detailed inventory of the ninth-grade course as it now exists.

2. A detailed analysis of the mathematical needs of children as shown first by the subject-matter of other courses which they would take within the high school.

3. The determination of the mathematical notions, principles, and operations—of the types of mathematical reasoning and skill—of which continued use is made in later life-activities.

The authors postulated "that this material would be appropriate curriculum material for the public schools only on the condition that it is found to represent the needs of a relatively large proportion of our student population."

From the investigation of nine textbooks in first-year algebra the authors have based the statement that "Certainly less than one-third of our teaching time, even if teaching time is only partially correlated with the distribution of problem-content, is devoted to 'thought' problems in which the pupil is forced to meet new thinking situations." They state that "the typical textbook devotes more than 80 per cent of its problems to material of a formal or automatic type, the type that requires after its initial presentation little or no thought," and "that neither in their general arrangement of topics nor in their detailed organization of explanatory and problem-material in particular assignments have these books been designed with an adequate regard for the ways in which students learn mathematics."

The core of the mathematical creed set forth by the authors is "that we teach mathematical subjects in the public schools to develop in the pupil the ability to use intelligently the most powerful devices of quantitative thinking; the equation, the formula, the graph, and the properties of the more important space forms."

The chapter on "How Algebra Became the Ninth-Grade Course" will be interesting and suggestive to many teachers.

The chapter on "The Design and Construction of Standard Tests in Secondary Mathematics" is a bit of important research work the results of which should be available to every teacher of mathematics. Our teachers are in dire need of more intelligent methods of testing the results of their own teaching. The work of Rugg and Clark along this line is a large contribution to the secondary field.

The important thing to note here concerning the Rugg and Clark tests is to point out that the tests have revealed many things which it would have been impossible to find out without them. Chapters v and vi of the monograph set forth very carefully and adequately what the results show.

The authors charge further (see chapter vii) that the pupils fail to grasp mathematical principles, and they lay this to the fact that we have "a clouded teaching emphasis," and also that "we have not analyzed the learning process in secondary mathematics."

It is the opinion of the authors that inefficiency in secondary mathematics is due "largely to a lack of the specific delineation of aims and outcomes." A discussion of these outcomes is given in chapter vii ("Training in Logical Thinking").

Definite criteria for the design of a course of study are set up in chapter viii, and a discussion of current tendencies is given, together with the results of the author's preliminary investigation. The authors have a feeling that in the past we have builded upon our ninth-grade mathematics too much, that we should now consider the revision downward, and finally that "ninth-grade mathematics will certainly come to be regarded by school men in our generation as the last year of mathematics that will be required." Whether this is true or not the fact remains that the problem cannot be solved by pushing down the conventional treatment a year or two (say in the junior high school); the reorganization must be more fundamental.

Finally they give a tabular analysis of the use of first-year algebra in other high-school courses which is most illuminating. As a result of their study the authors hold that at least one-half of the material of first-year algebra cannot be defended in terms of use in other high-school subjects. On the other hand they show that we have omitted from our first-year course many of the important ideas necessary to a proper understanding of future work. They cite evaluation as an example of a type of work that is sadly neglected, and they make the statement (p. 143) that "Of all the operations which are now taught, the only one which has value as real mathematics is the 'equation of the first degree' and that only as a tool for representing relationships."

The plan of determining what to teach by finding out if possible what will function in later work seems to the writer to be most commendable, and it should be the duty of everyone interested in the teaching of mathematics to support the movement so well started by Rugg and Clark to determine these

minimum essentials. The kind of experimental teaching done by the authors and described in chapter ix of the monograph is full of suggestions which every progressive teacher should follow. We ought to experiment more; we ought to confer with each other more; we ought to study our methods in more detail and set down in "black and white" what we find out. A great deal is lost in our field because a great many teachers fail to write down in permanent form many ideas for the improvement of teaching which they have found helpful. One reason why we teachers have to talk so much in the classroom is because the writers of textbooks have done so little. Let us support the doctrine set forth by Rugg and Clark in their monograph that we make the text do more of the teaching by putting into it more meaningful statements with reference to the content.

To many the monograph may seem to reflect a radical view; to some it may seem to be impractical; to the writer it seems to be the most encouraging bit of evidence that we are making real progress in our teaching that he has yet seen. Any teachers of mathematics who fail to read this monograph carefully will lose a chance to secure a large bit of important information and encouragement for future work along real advanced lines in mathematical education.

W. D. REEVE

UNIVERSITY OF MINNESOTA

4. *Educational adjustment after the war.*—School people are just now anxious to adjust their educational program to meet the needs growing out of the world-war. At the same time they are just as anxious to take advantage of the spirit of the hour in an effort to make the schools function as training agencies for a higher type of social service than has been developed in the past. Dr. Dean in his new book[1] reviews briefly the outstanding examples of such adjustment, both in this country and abroad, and suggests a wealth of individual and institutional activity which should lead to enrichment and broadening of the school curriculum and at the same time train for the kind of service needed not only at the present time but after the war. He points out lines of activity for superintendents, principals, teachers, and students in elementary, secondary, and higher institutions and shows how necessary emergency war work may be made a part of the daily program. Especial attention is given to the enrichment of industrial arts courses and to the necessity for immediate extension along numerous vocational lines. A special appeal is made to administrators asking for such extension at this time because of the favorable attitude toward vocational training which has grown out of the demand for conservation and the scarcity of skilled technical workers.

In his discussion covering the re-education of crippled soldiers Dr. Dean calls attention to the experiences of France, Belgium, England, and Canada and

[1] *Our Schools in War Time and After.* By Arthur D. Dean. Ginn & Co., 1918. Pp. 335.

suggests a practical training policy for the United States. In this connection he points out the responsibility of existing educational institutions as factors in the provision of such training and calls attention to a similar responsibility in connection with our army of industrial cripples, who in the past have been neglected, resulting in enormous individual and public economic loss.

Throughout the book an appeal is made for the conservation of boy and girl power rather than emergency exploitation through relaxation of supervision during the early wage-earning years, twelve to sixteen. A plea is made for real community and national service as a part of training or in addition to the usual school training, with the thought that such service will enrich rather than restrict the educational experience of the boy or girl. It is with this in mind that the writer recommends such activities as those centering around the Boy Scout, Camp Fire Girl, Farm Cadet, and Red Cross organizations. The book is interestingly written and should be an inspiration to either school administrators or teachers.

E. T. FILBEY

II. CURRENT EDUCATIONAL PUBLICATIONS RECEIVED IN MAY, 1918

A. GENERAL EDUCATIONAL THEORY AND PRACTICE

ALLEN, WM. H. *War Facts Tests for Graduation and Promotion.* Yonkers-on-Hudson, N.Y.: World Book Co., 1918. Paper. Pp. 80.

EARHART, WILL, AND MCCONATHY, OSBOURNE. *Music in Secondary Schools.* United States Bureau of Education Bulletin No. 49, 1917. Washington: Government Printing Office. Pp. 37.

FLEXNER, ABRAHAM. *General Education Board Report of the Secretary, 1916–1917.* New York: General Education Board. Illustrated. Pp. x+92.

HOLLINGWORTH, LETA S., AND WINFORD, C. AMELIA. *The Psychology of Special Disability in Spelling.* New York: Teachers College, Columbia University, 1918. Pp. vi+105.

JONES, W. FRANKLIN. *A Study of Handedness.* Vermilion, S.D.: University of South Dakota. Pp. 80.

LEAKE, ALBERT H. *The Vocational Education of Girls and Women.* New York: Macmillan, 1918. Pp. xix+430. $1.60.

NOLAN, ARETAS W. *The Teaching of Agriculture.* Boston: Houghton Mifflin Co., 1918. Pp. ix+277. $1.30.

Report on Some Measurements in Spelling. New York: Division of Reference and Research. Publication No. 16, 1918. Paper. Pp. 88.

ROGERS, AGNES LOW. *Experimental Tests of Mathematical Ability and Their Prognostic Value.* New York: Teachers College, Columbia University, 1918. Pp. 118.

THEISEN, W. W., AND OTHERS. *An Educational Survey of Janesville, Wis.* Issued by C. P. Cary. Madison, Wis.: State Department of Public Instruction, 1918. Pp. viii+329.

B. TEXTBOOKS FOR ELEMENTARY GRADES

HERVEY, WALTER L., AND HIX, MELVIN. *Eighth Reader* ("Horace Mann Series"). New York: Longmans, Green & Co., 1918. Pp. viii+488. $0.80.

KILPATRICK, VAN EVRIE. *The Child's Food Garden* ("School Garden Series"). Yonkers-on-Hudson, N.Y.: World Book Co., 1918. Illustrated. Pp. 64.

New-World Speller. Teachers Manual. Paper. Pp. 32. Book I, pp. viii+136; Book II, pp. viii+144+viii; Book III, pp. viii+120+xv.

PARKMAN, FRANCIS. *The Oregon Trail.* New York: Henry Holt & Co., 1918. Pp. xvii+397.

SMITH, GEORGE J. *Longmans' English Lessons, Third Year.* New York: Longmans, Green & Co., 1918. Pp. 58. *Longmans' English Lessons, Fourth Year.* Pp. 106.

STRASBURGER, AMELIA, AND CHANKIN, JOSEPH. *Systematic Drill in Arithmetic* New York: Longmans, Green & Co. Book I, pp. v+122; Book II, pp. x+182; Book III, pp. x+181.

TAYLOR, DAVID C. *The Melodic Method in School Music.* New York: Macmillan, 1918. Pp. xi+171. $1.00.

C. TEXTBOOKS FOR THE HIGH SCHOOL

BREASTED, JAMES HENRY, AND HUTH, CARL F., JR. *A Teachers' Manual for the Breasted-Huth Ancient History Maps.* Chicago: Denoyer-Geppert Co., 1918. Pp. 134. $0.75.

HARDING, SAMUEL BANNISTER. *A Teachers' Manual for the Harding European History Maps.* Chicago: Denoyer-Geppert Co. Pp. 112. $0.75.

HOPKINSON, LESLIE WHITE. *Greek Leaders.* Boston: Houghton Mifflin Co. Pp. xxi+259. $1.00.

SPENCER, FORREST EUGENE. *Trozos de Historia.* A Spanish Historical Reader. Chicago: Ginn & Co. Pp. ix+210. $0.80.

STEEVER, MAJOR E. Z., III, AND FRINK, MAJOR J. L. *The Cadet Manual.* New York: J. B. Lippincott Co. Illustrated. Pp. xxx+317.

VOSBURGH, WILLIAM LEDLEY, AND GENTLEMAN, FREDERICK WILLIAM. *Junior High-School Mathematics.* Second Course. New York: Macmillan, 1918. Pp. x+212. $0.90.

WILSON, MARTHA. *Library Books for High Schools.* Department of the Interior, Bulletin No. 41, 1917. Washington: Government Printing Office, 1918. Paper. Pp. 175.

INEXPENSIVE COVERS FOR YOUR OLD PERIODICALS

When marked alphabetically with name of magazine and numerically by volume and arranged on the shelves, they look as well as bound volumes.

LIBRARY COVERS

	Dozen lots	100 lots
Standard size 10x7x4 @	$2.50 per doz.	$12.50 per 100
No. 2 size 12½x9½x4 @	3.00 "	15.00 "
No. 3 size 13x10x3½ @	3.50 "	20.00 "
No. 4 size 14½x10½x3 @	3.50 "	20.00 "
No. 5 size 16½x11½x3 @	4.00 "	25.00 "

F.O.B. Chicago

H. SCHULTZ & CO., *Inc.*
519 W. Superior Street Chicago, Illinois

Going to the

N. E. A. in Pittsburgh?

Then Plan to Remain for Study in the

Summer Term of the University of Pittsburgh

Six weeks, July 8 to August 17, 1918

The regular faculty, supplemented by specialists from other Universities, will offer a large variety of courses in all *Academic, Educational, and Special Departments.*

The Psychological Clinic will give courses designed for teachers planning to work with the exceptional child in the special class. This will include Mental and Physical Tests, practical work in Industrial Arts, and Teaching in a class of children of arrested development.

The School of Childhood will be in session and will present courses and demonstrations on the fundamental principles underlying the education of small children for democracy.

The Junior High School is featured in a group of special courses on organization, curriculum, and method. Complete lists of courses are offered for Teachers of Music, Fine, Industrial, and Household Arts, Physical Education, and Commercial Subjects. For *Bulletin address*

THE REGISTRAR,
University of Pittsburgh

National War Savings Day

June 28

Bausch and Lomb
BALOPTICON
THE PERFECT STEREOPTICON

Invaluable for educational and entertainment purposes—an ideal projection lantern in the classroom, laboratory, or assembly hall. Models for either lantern slides or opaque objects (postcards, photo prints, specimens, etc.) —or both. Equipped with the new gas-filled Mazda lamp, absolutely automatic.

Because of the demand made upon our resources for some of the government's most important military needs, we are unable to make Balopticon deliveries for the present. While proud to be of such service in this world-crisis, we shall expect to serve our other patrons even more efficiently than before, when the world is again at peace.

Bausch & Lomb Optical Co.

554 ST PAUL STREET, ROCHESTER, N.Y.

NEW YORK WASHINGTON CHICAGO SAN FRANCISCO

Leading American Makers of Microscopes, Projection Apparatus (Balopticons), Photographic and Ophthalmic Lenses, Binoculars, Range-Finders, Gun Sights, Searchlight Reflectors, and Other High-Grade Optical Products

FINE INKS AND ADHESIVES
For those who KNOW

Higgins'

- Drawing Inks
- Eternal Writing Ink
- Engrossing Ink
- Taurine Mucilage
- Photo Mounter Paste
- Drawing Board Paste
- Liquid Paste
- Office Paste
- Vegetable Glue, Etc.

Are the Finest and Best Inks and Adhesives

Emancipate yourself from the use of corrosive and ill-smelling inks and adhesives and adopt the **Higgins Inks and Adhesives.** They will be a revelation to you, they are so sweet, clean, well put up, and withal so efficient.

At Dealers Generally

CHAS. M. HIGGINS & CO., Mfrs.

Branches: Chicago, London

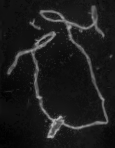
271 Ninth Street Brooklyn, N.Y.

Paragon Ribbons
and
Red Seal Carbon Paper

These products are made in *our own factory*, by our own specially trained workmen, according to our own methods and formulas. These methods and formulas are the result of our unrivaled experience in ribbon and carbon paper making and these goods are the best that money can buy.

Send for price list

REMINGTON TYPEWRITER COMPANY

INCORPORATED

374 BROADWAY NEW YORK CITY